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EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D., - - -
WILLIAM PORTER, M. D., - - - - } EDITORS.
R. B. H. GRADWOHL, M. D., - - -
OTHO F. BALL, M. D., - - - - - MANAGING EDITOR.

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THE PARASITE OF CANCER.

In the May issue of the *American Journal of the Medical Sciences* appeared the work of Dr. Gaylord, of the Buffalo Institute for the Investigation of Cancer, on his efforts in the direction of finding the cause of this disease. The paper embodies the results of Gaylord's work for some time. In it he takes the definite stand that he has found the parasite that causes cancer. His work as detailed in his article consists briefly in this: in the abdominal fluid of a case of cancer of the cecum, he found a small body which he took to be a parasite. Injection of the *fluid* from this case into rabbits produced cancer in them, but Gaylord did not recover the same small body from the animal. Other experiments along the same line were noted.

There is a general indefiniteness about the whole article that savors not of a scientific communication which should be accepted as conclusive proof of anything. In the first place, Gaylord has not proven that he produced cancer in the animals by injection of his parasite, inasmuch as he did not obtain a pure culture of it for injection, but merely used the fluid for injection purposes, and therefore reproduced cancer by simply transplanting cancer cells themselves; an experience that has been done again and again. He obtained no culture at all, nor does he mention how the parasite may be recognized. He gives no pictures of his protozoon, although he gives those of Plimmer and Sanfelice. We must candidly admit that the contribution of Gaylord absolutely throws no light on the

cause of cancer. To our mind it is merely a reiteration of the work of Plimmer and Sanfelice, and a case of history repeating itself. This work of these three investigators has arrayed the profession into two bands: one maintaining that the bodies described are broken-down cancer cells, the other as stoutly maintaining that the bodies are cancer-producing protozoa. We must say that we lean to the side of the first-mentioned faction, in the light of reason and in the absence of definite proofs on the part of the second class.

As an addendum it might be added that Nils Sjorbing, of Sweden, has just presented his work on a cancer "parasite" to the German Surgical Association of Berlin, and the conservatives present, including Israel, Gussenbauer and Jurgens, have received it with scant courtesy, and with the dictum that it is the old, old story—*i. e.*, the Swede demonstrated bits of tissue instead of animal bodies.

CURIOUS CASES OF AUTO-SECTIO CÆSAREA.

R. Loeffler reports a case of auto-sectio cæsarea: a Mohammedan woman, forty-two years of age, who, suffering of osteo-malacia, felt very badly during the last part of her pregnancy, was afraid she might die before the confinement. Intending to save the fœtus, she opened her abdomen and uterus with a common pocket-knife. After having removed the child and the placenta she ordered her little daughter to sew up the wound, which was done with a rusty needle and ordinary thread. Loeffler found mother and child in good condition. The wound healed per primum.

This case, certainly rare, is, however, not unique. During the last two decades the following cases of cæsarean section done by the patients themselves have been reported:

Gjorgjewic (*Wien. mediz. Woch.*, 1880) published the history of a case nearly identical to the one mentioned above. The wound was sewed up by a farmer's wife. The mother made an undisturbed recovery.

Madigan (*London Lancet*, 1884) reports a case of a woman of thirty-four years, who opened her abdomen and uterus with a razor and took out the child. In this instance help was not brought, and mother and child were found dead some time later.

Guggenberg (*Brit. Med. Journal*, 1885) was called in to close a perforating wound of the abdominal wall and the uterus, inflicted by the patient herself with a razor. The child was dead, the mother recovered.

Aisenstadt (*Wratsch.*, 1886). A woman of forty years opened her abdomen and pregnant uterus with a hatchet, after a quarrel with her husband. The wound was sewed up, but the woman died the same day. The child was living.

A most peculiar case of this kind was reported by Doctors Serpieri and Baliva (*Gazetta degli ospitali*, 1886, quoted from Gould's "Anomalies and Curiosities" . . .). A woman illegitimately pregnant, at full term, opened her own abdomen on the left side with a common knife. She

opened the uterus in the same direction and endeavored to extract the fœtus. To expedite the extraction, she drew out an arm and amputated it, and finding the extraction still difficult, she cut off the head and completely emptied the womb, including the placenta. She bound a light bandage around her body. Then she dressed herself, mounted a cart and went into the city of Viterbo, where she showed her sister a cloth bathed in blood as menstrual proof that she was not pregnant. On returning home, having walked five hours, she was seized with an attack of vomiting, and fainted. Thirteen hours after the infliction of the wound the physicians were called in. The abdomen was irrigated and sewed up. After the eighteenth day the process of healing was well progressed, and the woman recovered. H. E.

CONCENTRATION IN SCIENTIFIC WORK.

We are not advocates of specialism where the term is used as, too often, a synonym for narrowness. "The man of one idea" is neither a safe physician nor a wise counselor. Deliver us and our patients from the man who is always ringing in his pet hobby and peculiar theory. Such a man looks only through glasses with a limited field, and sees but the organ in which he is specially interested. He ignores all else, and magnifies the importance of this.

Although this danger attaches to all special work, yet it is true that most men should have a life-work in some definite direction. This need not lead him to neglect general acquisition—rather it should stimulate him to become familiar with all that enters into the building of the wall, in order that the key-stone in his efforts may be securely laid.

It is not needed that the physician should abandon general practice to become expert in some chosen line of investigation, but let him at least be, if he can, well grounded in the advanced thought and progress of that special department. Such a man in even a small village may become an authority and be the consultant for the whole district. A physician living in a small mining town in Illinois is deservedly looked upon as the best posted practitioner on cardiac diseases in all that country, and his advice is sought from far and near. Another, in a still smaller town, is one of the best microscopists in the West.

Where it can be done, we believe that practice should be limited to the class of diseases that the practitioner is best fitted to treat. It is a reproach to our profession that in our western cities a surgeon who claims distinction as an operator will attend a case of measles in the morning, operate for appendicitis at noon (funeral three days later), and preside at the delivery of a pickaninny after supper. Such surgeons would criticise harshly an oculist who would set a broken leg or an aurist who would "cut for stone;" yet they will treat anything, from fever to fibroids, and prescribe for all things between hemicrania and hemorrhoids.

Of course, each man must judge for himself how far he can specialize; but we are sure that in so far as he does limit himself to one line of work (not study), he will be more successful and more honored.

TREATMENT OF ECLAMPSIA.

A most interesting paper by Stroganoff (*Monatschr. f. Gebtsh. u. Gyn.*, October 6, 1900) seems to be apt to overturn the routine treatment of eclampsia with chloroform narcosis. On theoretical reflections he concluded that the two main principles for a proper and judicious treatment of eclampsia ought to be the following:

1. In order to prevent new convulsions, the irritability of the nervous system has to be reduced and every external irritation has to be avoided.

2. The vital energies of the patient have to be aided by inciting the action of heart and lungs, and by accelerating confinement.

Acting in accord with these principles, he employed in all his cases of eclampsia the following procedure:

As soon as possible after the first convulsion he gives a subcutaneous injection of one-fourth of a grain morph. mur., and continues to give narcotics during the next twenty-four to forty-eight hours.

The same dose of morphine is repeated in one to two hours, according to the condition of the patient. In very severe cases a third injection may be given, one to one and one-half hours later. Two or three hours after this third dose of morphine (in milder cases after the second) the patient gets thirty to forty grains of chloral-hydrate per rectum, and is kept now under influence of narcotics, by getting twenty to forty grains of chloral-hydrate every six to ten hours. Should she show symptoms of an approaching fit, one-sixth to one-fourth of a grain of morphine is injected. This combined use of morphine and chloral-hydrate gives better results than the exclusive use of either one.

In order to ease the respiration, inhalation of pure oxygen is used (instead of the usual inhalation of chloroform, which, according to the views of Stroganoff, does considerable harm by asphyxiating the patient!). The patient is in a well-ventilated room. Nose and mouth are continually and carefully cleaned from mucus. Every external irritation, every superfluous touching of the patient, noise, dazzling light, etc., have to be avoided.

The action of the heart is incited by giving besides milk for nourishment a mild tea infusion. If the kidneys are not considerably affected some brandy is added. Tinct. moschi, ether sulf., etc., may be used.

Repeated baths, or wrapping of the patient in order to excite perspiration, do more harm than good, as these procedures, both, are too irritating, and obstruct the breathing.

Are any manipulations with the patient unavoidable—for instance, at operative delivery, a. s. f.—chloroform has to be given to prevent new convulsions brought on through these irritations. But chloroform narcosis has to be limited to the shortest time possible.

The results attained by Stroganoff with this scheme of treatment have fully justified his theoretical presumptions. Out of fifty-eight cases of eclampsia which came under his care, and in which his method was applied, *none* died. This result ought to be convincing, as statistics, published by many authors, show that the maternal mortality in eclampsia so far was between twenty-two and thirty-nine, four per cent. (Hofmeister).

H. E.

MEDICAL LIBRARY BUILDING.

It is now something like a year since the St. Louis Medical Library has been in operation, and it has been well patronized by the profession of the city, according to the annual report of the librarian. The funds of the association have not been any too large, but in spite of that quite a good assortment of books and journals are on hand at the institution. The library is at present located in an office building in the western portion of the city.

A project which should be successful is the proposed building of a medical library building for the use of the Library Association and for the use of the various medical societies of the city as an assembly hall. A liberal proposition has been made by a prominent public-spirited citizen to the effect that if the medical profession of the city of St. Louis raise $10,000 for the purpose of purchasing a lot, that the aforementioned citizen will build the profession a library building on this lot and will turn over the building, when completed, to the profession, to be owned and controlled by them untrammeled. In other words, a pure and simple gift to the profession is offered of a medical library building costing perhaps $60,000 or $70,000. It is now before the profession to get together and collect this small sum. It goes without saying there should be no difficulty in raising this money, inasmuch as there is a large profession here, and many of the physicians of the city are in a position to give handsomely toward the original $10,000 fund.

The profession should start immediately in their efforts to raise this money, for it is a magnificent opportunity for them to own a handsome library building, which will be a credit to the profession and to the city. At the last meeting of the Medical Society of City Hospital Alumni, an organization always in the van in the direction of furtherance of scientific enterprises, a resolution was passed, giving into the hands of a committee of three the task of raising $1,000 from the *personnel* of the society as a tithe of the total sum of $10,000. We anticipate no difficulty, and if there is any *esprit de corps* in the remainder of the profession outside of this society, the other $9,000 should be speedily forthcoming. We welcome the idea of this coming monument of medical progress in this city. It will serve as a wedge in the removal of the odious lethargy which is said to weigh down on our St. Louis profession, and will serve to enhance their standing in the eyes of our brethren of New York, Philadelphia and Chi-

cago, where, sad to relate, we are regarded as somewhat "antique" in our ideas, progress and scientific attainments.

THE SERO-DIAGNOSIS OF TUBERCULOSIS.

We know that the use of tuberculin as a diagnostic agent in tuberculosis is sometimes attended with failure, and that it is often not deemed advisable to use it in the human being, for both esthetic reasons and for reasons of safety to the patient. It will be interesting to know, then, that the sero-diagnosis of tuberculosis seems now to be well-nigh accomplished. This work was begun by the two French observers, Arloing and Courmont, who secured an agglutination of tubercle bacilli by mixing them with blood from tuberculous patients. According to their last publication in December, 1900, they had studied over four hundred cases. In one hundred and ninety-one cases of tuberculosis of the internal organs they found the reaction positive in 87.9 per cent. In forty-five patients with tuberculosis of the bones, joints, etc., they found the reaction positive in 76.6 per cent. In one hundred and thirty patients with various ailments who showed no positive signs of tuberculosis they found the reaction positive in thirty-four per cent., and twenty of this last class of cases showed, at autopsy, gross signs of tuberculosis. Finally, in forty-one healthy patients the reaction was positive in twenty-six per cent.

This opens up a new field of diagnosis in this disease, and promises to give the internal medical man decided help in the diagnosis of obscure tuberculous troubles. Good results have been obtained by other workers, although some have declared their lack of success in following out the procedure. These failures can be due to the difficulty of obtaining the proper cultures and material with which to test the agglutinative properties of the tuberculous patients. Behring has used an emulsion of tubercle bacilli for this work, and with good results. Romberg, who discusses the subject in the *Deutsche medicinische Wochenschrift* for May 2, 1901, asserts that he has used Behring's emulsion with good success, and that it worked even after standing for some time.

The importance of this test is just as great in given cases as is the Widal test in typhoid fever. It is especially in obscure cases that its merits will be seen. It has failed, it is true, in the hands of some. So has the tuberculin test. The two tests ought surely to cover all cases. Strange to say, the sero-diagnostic test has not been as successful in cattle, etc., as it has been in man, but this may depend upon errors in technique. The work is still in its infancy, but we have great hopes for its ultimate importance and worth.

THE TREATMENT OF ABDOMINAL GUNSHOT WOUNDS.

Why did Sir William MacCormac say so tersely and drastically, in speaking of the treatment of gunshot wounds of the abdomen in the soldiers wounded in the Transvaal War, "A man with a gunshot wound

of the abdomen in this war, if operated upon, dies; if left alone in quietude he recovers?" This is the query that has been well discussed and answered by Peterson, of the Heidelberger Clinic, in the *Muenchener medicinische Wochenschrift* (April 9, 1901).

It was found that in the Boer War that the fatality following operation in gunshot abdominal wounds was very great, while it was exceedingly low in those cases not operated upon but treated by the expectant method. This was found upon investigation to be due to the following causes: the operations for perforative gunshot wounds were performed by the English surgeons under the most trying conditions; for instance, with flies covering the intestinal coils in swarms, the patients themselves being worn-out by long marches, hunger, etc. On the other hand, where no operation was performed the patients often recovered, even though there was one or more perforations. The wounds made by the small caliber Mauser bullets of the Boers often closed spontaneously, both on account of the small-sized caliber and the great driving power, and, furthermore, because there was a prolapse of the mucosa and a fibrinous exudation around the hole; another point in favor of favorable termination of these wounds is the fact that in most cases the intestines were empty, and therefore there was not much danger of peritonitis. This statement is well borne out by the old maxim whereby pistol duelists are counseled to take a dose of castor oil before the fray.

The writer of the article sums up and makes the following conclusions:

1. The rules for the treatment of gunshot wounds in military campaigns cannot be followed out in cases in private practice, where conditions are entirely different.

2. In every case (in private practice) where there is a suspicion of a perforation, laparotomy should be made.

3. In the first hours, when the diagnosis is uncertain, every minute of indecision means added danger to the patient, so that "waiting" is far more dangerous than operating.

4. Expectant treatment can only be countenanced under most favorable conditions—*i. e.*, where the patient is in excellent shape and shows no signs of perforation.

THE INTERSTATE MEDICAL JOURNAL.

It is not the policy of the INTERSTATE MEDICAL JOURNAL to call attention to its success, but we have a statement to make to our readers that will no doubt be as pleasing to them as it is gratifying to us.

Eight years ago our journal began in a modest way to represent the medical profession of the great West and Southwest. It was at a time when the mania for publication was abroad in the land, the mails were filled with "specimen copies," and it was hard to secure favorable recogni-

tion. When the present management obtained full control, it was determined to place the JOURNAL upon a financial and literary foundation, the soundness of which could not be questioned. How well we have succeeded is known. By the law of the survival of the fittest, and as the result of hard, continuous work, the JOURNAL has expanded until it now circulates in every State in the Union, and has a large foreign *clientele*. By the absorption of a number of other journals, it has increased its possibilities and value.

As evidence of the truth of what we say, we can offer two proofs—the first is our large and rapidly growing circulation, which shows the estimation in which the JOURNAL is held by the profession; the other is the amount and character of our advertising patronage. No shrewder class of men exist than those who use the medical press to reach their customers. They must be wide-awake, ethical business men. Such seek the best and appreciate it.

We do not claim to have the only good medical journal in the country. Our exchange tables show many periodicals of which the profession should be proud. We only say that so far as heart, brain and bank account can attain, none of these shall excel us in our continued efforts to improve the JOURNAL, and make it representative in every honorable sense.

THE INTERSTATE MEDICAL LABORATORY.

We desire to call to the attention of our readers the fact that we have established in conjunction with this publication a medical laboratory for the purpose of microscopical examination of all exudates, fluids, secretions and tissues for the aid of physicians in diagnosis. We are prepared to make rapid and efficient examinations, and to this end invite the physicians to send us their specimens for examination.

Our laboratory will be under the charge of our Dr. R. B. H. Gradwohl, Pathologist to the St. Louis City Hospital. He will give careful, conscientious attention to the specimens submitted to us. In another part of the JOURNAL will be announced the fee list, etc.

CLINICAL LECTURE.

CLINICAL LECTURE ON SURGERY.

By N. Senn, M. D., Ph. D., LL. D., of Chicago, Illinois,
Professor of the Principles and Practice of Surgery and Clinical Surgery, Rush Medical College, Chicago.

Epithelioma of the Lower Lip.

GENTLEMEN:—This is the patient upon whom we operated last Thursday for an extensive epithelioma of the lower lip of unusual malignancy. In a comparatively short time the primary tumor developed enormous proportions, and exhibited all the macroscopic appearances of an exceedingly malignant growth. The degree of malignancy was also indicated by the existence of early regional metastasis; that is, I found in the submental and submaxillary spaces enlarged lymphatic glands, so that it became necessary, owing to the extent the disease involved the entire lower lip, to remove the entire lip. I performed an operation with a view of restoring the tissues lost by disease, namely, Wölfler's procedure; that is, I made an incision a short distance from the angle of one jaw to the other, which was enlarged by dissecting the margins upwards and downwards to expose the submental and submaxillary spaces freely, with the lymphatic glands affected, and the normal glan 's embedded in adipose tissue were removed by careful dissection in one connected piece.

This case proves plainly that the old authors were mistaken in believing that epithelioma of the lip seldom, if ever, gave rise to glandular invasion; yet in this case, as in others that have come to this clinic, we found at the end of a year or six months plain indications of glandular involvement, and we have followed the rule in all cases, when the disease has advanced to any considerable extent, to invariably precede the excision of the primary tumor by thoroughly clearing out the submental and submaxillary spaces in the same manner and for the same reasons as in dealing with glands in the axillary space in operating for malignant disease of the mammary gland. After these spaces were cleared out and the entire lower lip removed, the quadrangular flap was elevated, so that the upper border corresponded with the level of the normal lip. This large flap was then fastened to the anterior surface of the lower jaw by three points of catgut sutures, a part of the operation I place the greatest stress on, because by so doing this immense flap, the weight of which is considerable, is held in proper position, and this suturing has the advantage of excluding at once from the submental and submaxillary wound cavity the mouth, which is such a fruitful source of infection. After the lip was properly anchored, we covered the lower margin of it with Thiersch's skin grafts. I was

anxious to supply the inner surface of the new lip and its free margin with skin. This, of course, is an unfavorable locality for successful Thiersch's skin grafting. We will see now, on removing the strip of gutta-percha, to what extent we have succeeded. I am sure you will all be interested to observe that the free border of the lip is now supplied with a very satisfactory covering of epidermis. All of these large grafts have become attached, and will constitute in the future a very satisfactory and comely prolabium. Instead of mucous membrane, the free border of the lip in the future will be lined with ordinary skin and will adapt itself to its new environment, and probably in the course of four or six months from now will present more the appearance of mucous membrane than of skin.

Skin grafting under such circumstances is, as a rule, a very unsatisfactory procedure. But in this instance we have met with decided success; hence this practice is worth imitating. All of these wounds are healing satisfactorily. The lip is in proper position. I will suggest to the assistant not to dispense too soon with the very important mechanical support for the purpose of keeping the lip at its normal level—indeed, a little above the other—so as to make some allowance for subsequent contraction, which is inevitable. With a strip of adhesive plaster the lower lip will be raised and held up firmly against the upper one during the time required for the healing of the wound and for the epidermization of the inner surface of the new lip.

Relapsing Appendicitis.

Two weeks ago to-day we operated on this patient for relapsing appendicitis. The case interested us at the time the operation was performed, because I found it absolutely impossible to remove the appendix *in toto*. I found the appendix behind the cecum high up, firmly imbedded in a mass of firm scar tissue, which at the same time had formed attachments to the large vessels immediately behind it—the common iliac artery and vein. It was the first time I had an opportunity, in the presence of the class, to demonstrate a modified operation for the removal of the appendix under such circumstances—that is, removal of the organ by enucleation. The enucleation in this case was commenced at the attached side of the appendix by making a circular incision through the peritoneum only and reflecting the coat of the appendix downward and upward in the direction of the displaced organ. I found the organ materially increased in size; it was impossible to reflect the cuff any further, hence the incision was made the whole length through the peritoneal coat, and the organ removed carefully and slowly by enucleation. No ligatures were required. It is an admirable procedure and serves a very useful purpose in preventing accidents, which so frequently happen in performing the ordinary operation to important adjacent organs. The patient has had no untoward symptoms since the operation. The wound has healed throughout by primary intention.

In the next case the operation was performed two weeks ago to-day.

Here I was able to remove the appendix in the usual manner. It was a case of relapsing appendicitis of long standing. I found all the indications of severe catarrhal and ulcerative inflammation of the mucous membrane lining the appendix, with marked destruction on the proximal side of the organ, a condition which explained very clearly one of the clinical features present in this case, and that is incomplete intermission. In relapsing appendicitis the intermissions are incomplete in all cases in which there is permanent mechanical obstruction caused either by thickening of the inflamed mucous membrane narrowing the lumen of the organ, or by a deviation of the axis of the organ, resulting in flexion. Either of these causes or two combined may bring about mechanical obstruction, which interferes with the free outflow of the inflammatory product from the diseased organ into the cecum. In such instances one of the marked clinical features which will present itself is incomplete intermission. This patient always complained of soreness, which he referred to the region of the appendix. As you will notice, this wound has healed by primary intention.

In both of these cases we made the typical McBurney muscle-splitting incision, and in the case which required the removal of the appendix by enucleation, we made an opening large enough to cope safely with the diseased organ.

TUBERCULOSIS OF THE TARSUS OF THE RIGHT FOOT.

You have seen this patient only once since the operation was performed, and the healing process has reached a stage which will exhibit the marked therapeutic value of ignipuncture in the treatment of some forms of tuberculosis, notably tuberculosis of the carpal and tarsal bones. This was a plain case of tuberculosis involving the tarsus of the right foot. I was able in this instance to locate the disease with anatomic precision. I was satisfied, by examining carefully into the extent of the area of tenderness, that the primary focus involved the internal cuneiform bone. We were suspicious that the primary osseous focus had given rise to infection of the adjacent tarsal joints, a condition which was revealed at the time the operation was performed. I made here ignipuncture, penetrating through the surface with the needle-point of the Paquelin cautery, and through the internal cuneiform bone, opening above the adjacent joints. The moment the instrument was withdrawn, synovial fluid escaped from the tubular wound. The next day the patient was entirely free from pain, and he has not suffered from pain since the operation was performed. This tubular wound has filled up with granulations which occupy the entire wound, and present on the surface a very satisfactory appearance. Tenderness has disappeared. The swelling has diminished materially in size. The case demonstrates clearly the therapeutic value of ignipuncture, recommended so highly by Kocher years ago in the treatment of joint and bone tuberculosis, particularly in cases in which the disease involves either the wrist or ankle-joints. The wound remains absolutely aseptic. We have

been careful to guard against post-operation infection, and have succeeded in doing so.

Suppurative Inflammation of the Left Elbow-Joint.

This patient has been exhibited to you on a number of occasions. He is the subject of a mild form of suppurative inflammation of the left elbow-joint. We found that the swelling involved mainly, when the patient was admitted to the hospital, the upper recess of the joint. I made a number of punctures, and injected carbolic acid into the joint, but was forced to resort to the knife in effecting complete evacuation of the contents of the joint. The wound was then sealed. Since that time we have reopened it on two or three different occasions, under the most careful aseptic precautions, and we have now the satisfaction in finding that this portion of the joint has recovered almost completely from the suppurative synovitis.

I wish to show you this afternoon another part of the joint which is similarly affected and secondary to the primary disease involving the upper recess of the joint. Here, in the region corresponding with the radio-ulnar articulation, you will notice a very large swelling, with slight discoloration of the skin and marked edema. We have all the indications of extension of the disease from the part of the joint primarily involved to the radio-ulnar joint.

Perhaps, either to-day or at our next clinic, I shall open this joint under the strictest aseptic precautions, evacuate the contents, and resort to antiseptic intra-articular irrigation, or I shall simply puncture the joint and make the intra-articular injection through the canula of the trocar. By pressure I am able to force through the opening, occupying the upper part of the small incision, quite a little synovial fluid. The suppurative inflammation of the synovial membrane in the upper segment of the joint is under perfect control.

Suppurative Lymphadenitis of the Neck.

I have to show you a case of inflammation involving the lymphatic glands of the neck, a condition so easily mistaken for tuberculosis. In this instance, from the clinical history, as well as from the condition of the pharynx, we had every reason to assume the existence of a pyogenic suppurative lymphadenitis caused by infection through the pharynx. A large, rapidly growing abscess cavity formed around the lymphatic glands, and I removed in this case, as you will remember, the skin covering the abscess cavity, resorting to the vigorous use of the sharp spoon, packed the wound, sutured it only in part, and we have the satisfaction now that in less than two weeks this large cavity has almost completely healed. The healing process has been expedited by planting on the granulating surface at a point where the wound was not sutured a few of Reverdin's skin grafts, which show distinctly in the center of the granulating field.

TUBERCULOSIS OF THE ANKLE-JOINT.

This is the little girl upon whom I operated a week ago for extensive tuberculosis of the ankle-joint. I exhibit this little patient this afternoon for the purpose of insisting that in operations of this kind, where we have reason to believe that the operation has succeeded in rendering the parts implicated aseptic, the dressings should not be removed prematurely. I have not seen the wound since the operation was performed. There has been no mentionable rise of temperature, no pain, no indications calling for for the early removal of the dressings. The drainage used in this case consisted of a small strip of iodoform gauze, which has remained in the wound since the operation was done. The limb has been kept immobilized in a plastic splint; we have removed one-half of it, and we are enabled to remove the splint at any time we desire, and again resort to it as a means of fixation by reapplying it over the dressing.

LONG-STANDING SPECIFIC SYNOVITIS OF THE KNEE-JOINT.

This patient was made the subject of clinical investigation by a member of the class, who did himself a great deal of credit in his diagnostic work. The case was very obscure, and I am somewhat indebted to the gentleman who served as my consultant on that occasion for calling my attention to a beginning tabetic condition. This patient was the subject of long-standing, extremely obstinate specific synovitis of the right knee-joint, which finally yielded to repeated tappings and intra-articular irrigation with a solution of three per cent. of carbolic acid. He recently, again, entered the clinic, complaining of pain which he referred to the inner aspect of the left limb. On inspection I found a large swelling at the base of the thigh on its inner aspect and in connection with the ascending ramus of the ischium. I emphasized the fact that in this particular locality we most frequently meet with myxo-lipoma, a very doubtful tumor indeed, and one which is prone sooner or later to undergo transformation into a genuine sarcoma. We were a little reserved in this instance, although the clinical history does not point to any specific infection other than the specific urethritis; in view of the fact that the patient has now reached the stage of beginning locomotor ataxia, we gave him the benefit of the doubt and placed him under very energetic antispecific treatment, because there is just a possibility that the mass which we carefully studied at the time might be a gumma of the adductor muscles. We shall await with great interest the effect of the treatment that we are now pursuing, and I shall show you the case from time to time. The swelling has not increased in size; in fact, it has undergone no change.

INFLAMMATION OF THE FRONTAL SINUSES.

We have a number of new cases to present from the outdoor clinics. This boy will be operated on day after to-morrow. I am very glad to have

the opportunity of presenting him this afternoon, because the case is a somewhat unusual and very interesting one. The original trouble began in the nasal passages. He has had catarrh for years, and I am informed that polypi have been removed from the nose. Only recently the symptoms became aggravated, and new clinical features presented themselves in the form of a swelling which occupies the frontal region immediately over the root of the nose, where, on pressure, there is great tenderness indeed. The patient, at the same time, is subject to so-called neuralgic pain, which he refers to the same locality. He has quite a profuse and offensive nasal discharge. Considering the site of the swelling, the exquisite tenderness, and the spontaneous pain in the new territory involved, it is not very difficult in this instance to make a diagnosis. This is a case of inflammation of the frontal sinuses, caused by the extension of infection from the nasal cavity by continuity along the mucous membrane into the adjacent frontal sinus. I have no doubt we shall find, in opening the frontal sinuses, well-marked evidences of an existing empyema of the frontal sinus. In consequence of the inflammatory swelling narrowing the communication between the frontal sinus, and the nose, obstruction has taken place and retention has resulted. The frontal sinuses are now in a condition of great inflammation, which very satisfactorily explains the most conspicuous clinical features—great tenderness and marked pain.

Rabies and Warm Weather.—The recent epidemic of rabies in Buf falo and Rochester, New York, now under control, points out the fact that whatever else there is disputed about this malady, it is not that it does oftenest occur in warm weather.

The greatest danger lies in a community with many dogs, especially short haired dogs, they being oftener selected than long-haired animals.

There is a prodromatous or quiescent stage, and the furious or active stage, and it is during the former stage that most good may be done by promptly annihilating the animal.

The symptoms presented by a dog who is to be suspicioned of rabies are as follows:

(1) Altered behavior, showing irritability, restlessness and marked change of disposition. (2) Desire to eat dirt, grass, glass or swallow foreign bodies. (3) Tendency to stray, leaving their homes and usually returning sick. This is the quiescent stage.

Now as to the furious stage, the symptoms of which are well known, usually being change in voice, biting, snapping at real or imaginary objects, also the peculiarity of holding on to objects so as to be lifted up bodily. Another curious and important symptom is that dogs affected show no inclination to dodge blows or ward off attacks aimed at them—a sign of marked cerebral disturbance.

ORIGINAL ARTICLES.

KATATONIA.

By George Boody, M. D., of Independence, Iowa.

THE cases cited in this paper, a number of which are illustrated herewith, are grouped under the general term katatonia. These cases were formerly and are still, for the most part, classed variously under melancholia, mania, primary dementia, and stuporous insanity. In recent years only has an attempt been made, first in Europe and later in this country, to classify them under the term katatonia, which is itself a subdivision of primary dementia. In this reclassification we acknowledge our indebtedness to the great German alienists, Kahlbaum and Kraepelin, whose able work along this line has been received with great appreciation, especially in Europe.

Katatonia is a disease of early life. A great majority of cases occur before the twenty-fifth year, one case admitted recently being but fourteen years of age. Between twenty-five and thirty-five, cases are not uncommon; but after thirty-five the disease is seen with decreasing frequency. Kraepelin has recorded a case occurring in the sixtieth year, so that the possibility of its occurrence at any age should be borne in mind.

This psychosis is, as a rule, ushered in by more or less severe depression, without the extreme mental pain and anguish which are so often the most characteristic symptoms of melancholia. Often the patients are silent, dislike companionship, and hence seclude themselves; are aimless in action, unruly, cross and irritable. They show an apparent lack of interest in their immediate surroundings, they become inactive, their energies seem to be at the lowest ebb and they cease to work, though previously they may have been very industrious, and they prefer to spend their time in an immovable sitting attitude or in bed. Sometimes they show hypochondriacal symptoms, and complain of pain in the head and back or, perhaps, in the extremities. Some patients will have delusions, transitory as a rule, and following one upon another, singly or in groups, and rapidly or slowly. They feel that they are objects of persecution; that they are wicked and will be lost; that for crimes they have committed they are to be killed or punished forever; that they are about to die, perhaps during the coming night. Occasionally a patient will shake hands with those about him and bid them good-bye, weeping and showing signs of indescribable suffering. In such, a kind word may temporarily dispel all these false ideas, bring smiles to his face, and the patient himself will admit and laugh at his own folly of a few minutes before. I recently had a case in whom nearly all of the foregoing symptoms were present. Delusions marked the first stage of his insanity; later on he became silent and

listless, would no longer talk about his delusions, and sat quietly, preferably in seclusion.

In some cases at the onset the patients manifest sudden excitement, expressed both psychically and physically; they show great muscular activity and expend their energies in thrusting their arms out in every direction, striking anything in the way, not purposely, but apparently accidentally; they destroy their clothes and bedding, break up the furniture and kick holes in the wall. A recent case showed these symptoms just previous to coming to the hospital. At the same time, he was completely disoriented and there was a rush of ideas with incoherence. He shouted loudly and threatened some one whom he thought blew some substance into his face. His sensations seemed real to him, but suddenly gave way to others entirely different and very imperfectly defined. Other cases see strange things in the air, or upon the walls of their rooms and stare at them long, and with all the intensity at their command, sometimes not willing to tell what they see, at other times saying they see the devil, angels, or perhaps God. Hallucinations of hearing sometimes occur. One case of mine received messages through the ventilators in the room and replied to them in sudden, sharp and almost angry tones, again in a whisper or in a very loud tone, even a shout. Occasionally his anger would seem aroused and he would reply with the vilest epithets, at the same time cursing and swearing; often he would listen intently for some time and make no reply. Some patients show a marked degree of restlessness, walk about uneasily, jump up suddenly, rush into a room as if to hide, or down the hall as if to escape, even knocking over or brushing aside those who may happen to be in the way.

The symptoms which are most likely to attract attention first are described by Kahlbaum as negativism. Patients who have previously talked, become silent altogether, or, if they do speak, express themselves in a few unintelligible words, sometimes almost inaudible. One of my patients speaks almost constantly, even in bed, during the night in a low, guttural tone, repeating: "Let me out of here. I want to go home. Let me out of here. I want to go home." Others talk and laugh to themselves in audible tones, or whisper or merely move the lips without the slighest sound, while at the same time they appear wholly oblivious to their surroundings, and it is impossible to make them reply. Occasionally one may be induced to answer or even read or sing, as did one of my patients, who had previously been a singer of some little note. He would play and sing for a short time in a most pleasing and entertaining manner, and a little later would lapse into his former state of negativism and mutism. Two years ago he was able to sing well, but since then deterioration has been slowly and gradually taking place. During the past month, after many efforts were made to induce him to play and sing, he made the attempt once more, but was unable to do either. Another phase of negativism is muscular inhibition with or without rigidity. If patients are sitting in a

chair, they remain without changing their position unless moved by some one; if in bed, they remain in one position without moving a muscle for a long period of time, not even turning in bed, unless turned by the nurse; even then an unusual amount of muscular strength is required because the resistance is so great. If an attempt is made to take them out walking, they resist; when once out they resist coming into the house again, and must be pushed or even carried along; at meal time they resist going into the dining-room, refuse to eat and must be fed by hand or mechanically; after eating they refuse to get up from the table, and resist going out of the dining-room; they resist going to bed, being undressed and bathed, and must be helped with everything. With many of these patients there can be noticed one almost constant movement, a blinking or vibrating movement of the upper eyelids and a turning down of the eyeballs to such an extent that the cornea is hid by the lower lid, or *vice versa*. If the head or body is raised it will fly back, as though maintained in position by a spring, as soon as the hand is removed. The face is often waxy, giving it a shining appearance, and there is a placid or mask-like expression. There may be constant muscular contraction lasting hours, days or even weeks and months, as one case who has already gone about fourteen months in a state of strong continuous muscular contraction. At least he has been found in this condition at all times of day and night during these months. Frequently patients with negativism resist evacuating the bowels and voiding the urine when taken to the closet or when the vessel is at the bedside, even when absolutely necessary, and a little later will soil their clothes or the floor or even the bed. They assume every conceivable attitude, lying prostrate upon the floor with arms and legs extended, or posing statue-like for indefinite periods of time. If they are placed in an attitude very trying to the muscular strength, they will remain so for an hour at a time (one did so for just one hour), when they gradually relax and take some easy position. This is the so-called cataleptic condition. Their lips remain tightly closed, the saliva collects in their mouths, filling them so that it must be swallowed or forced out between the lips, and causing drooling. At other times they spit about everywhere, upon the bedding, furniture or upon the carpets or floors, and appear to be wholly unconcerned as to the cleanliness of their surroundings. They sometimes close their hands so firmly and so constantly that deep imprints of the nails are left in the palms.

Changeableness is quite a characteristic symptom. Marked depression may appear one day and be followed the next day by any of the other symptoms of katatonia, or the patients appear nearly normal. Muscular resistance, passive or active, mental inhibition, a cataleptic condition or mutism, may appear at any time in the course of the disease. Tonic and clonic impulsive movements are less common symptoms. In these paroxysms the patient falls upon the floor, the body becomes rigid, and following it he may assume every possible attitude before rising from the

floor. He may then suddenly spring to his feet, leap into the air, strike his heels together, clap his hands, rotate on one or both feet and sway the

A GROUP OF KATATONIA CASES.

body to and fro; or he may sit in a chair, describing circles with his body for a time. He may walk or run in a circle or back and forth on the floor

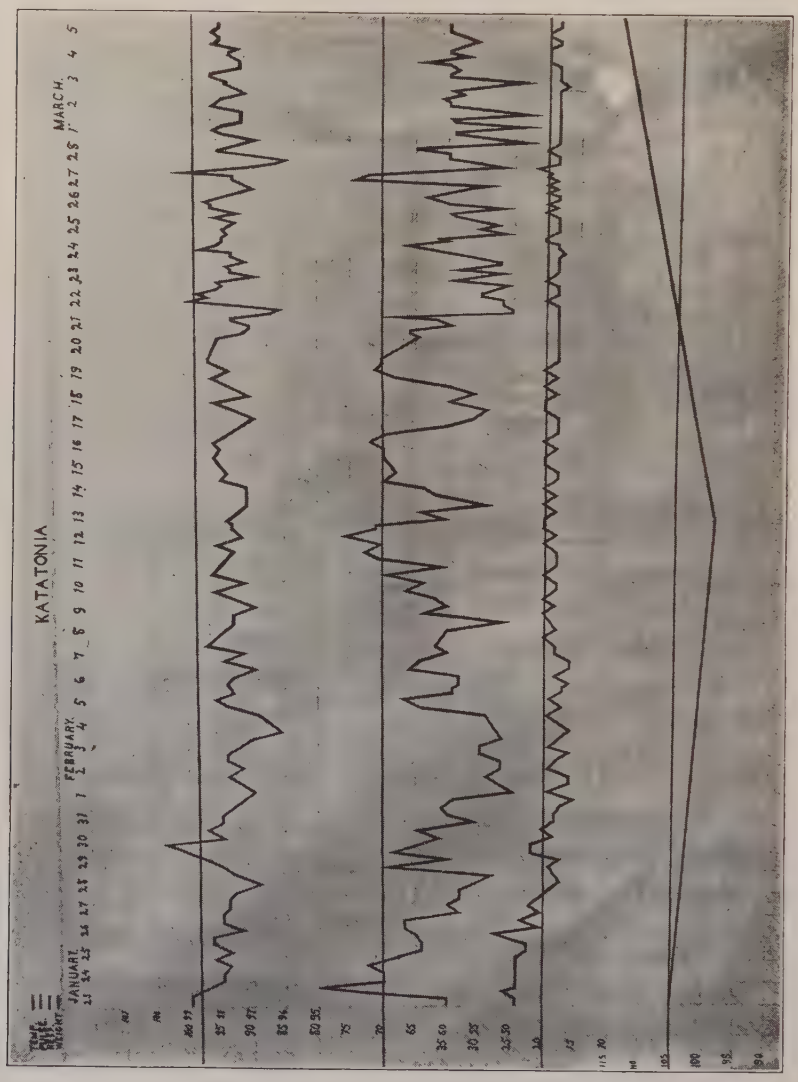
along a particular line. One other patient would sit statue-like in a chair, apparently oblivious to everything about her, but the moment any one attempted to go by she would suddenly and unexpectedly rise, pass in front of and describe a circle about the person, return to her chair and assume the same attitude as before, thus causing no little embarrassment to the uninitiated one. If shut into a room, he may pound on the door or take hold of the knob, and jerk the door back and forth for hours at a time, or stamp upon the floor, seemingly never tiring, and unless restrained there is no possible way of causing him to desist from activity. During these periods the patients often injure themselves and show no signs of pain. I have seen a patient of mine turn a somersault on the hard floor, another leap into a window without warning, breaking out many of the window-panes and injuring himself quite severely; another, without cause, spring upon and strike the person nearest a severe blow.

In a few cases the onset of the psychical symptoms are exactly like those in acute mania. There is a rush of ideas with or without incoherence; there may be shouting, singing, or cursing, or there may be transitory expansive delusions. When the latter symptom is predominant the patient may think he has all power, that he controls the universe, that he needs but to stretch forth his hand, give the command, and everything in it will stand still. Great motor restlessness characterizes this form, and the patient, if crossed in any way, may try to prove his muscular strength. After perhaps two weeks these symptoms subside rather suddenly and mutism and negativism take their place; as with one case of mine diagnosed as acute mania, but on account of later symptoms replacing the first described, the diagnosis was changed to katatonia. Some weeks later the cataleptic condition became the most prominent symptom and continued until the death of the patient from tuberculosis nearly a year later.

Speech disturbances are quite common, and, after a period of mutism, the patient may be constantly crying out loudly, uttering unintelligible words or sentences, using many unnecessary words, a symptom which goes under the name of verbigeration. Repetition of senseless words or rhymes occurs in the writing as well as speaking.

There is still another occasional symptom, the katatonic seizure, which is so striking that it leaves little doubt as to the diagnosis. I have recently had occasion to observe it in three cases, in two of which it occurred twice. A few hours after admission, a patient, a young boy, was taken with what appeared at first to be an epileptic seizure. He suddenly fell down, apparently unconscious, with pulse slow, soft and very easily compressed, and face pale. Upon picking him up it was noticed that the muscles of the body were not completely relaxed, but instead there was a certain amount of resistance. The arm, when raised, remained in the attitude in which it was placed, as in a cataleptic condition. When he first fell there was a quivering of the muscles, but no actual convulsive seizure. His respirations, slow and rather labored from the first, became slower, and

finally seemed about to cease altogether, but suddenly quickened again and approached nearly normal. A little cold water dashed into his face startled him, but a few minutes later, when he became accustomed to it, he resisted and would no longer respond. His eyes were open and bright and moved about in a quiet natural way, and the irido reflexes responded



to light quite promptly. During the attack there was rapid blinking of the eyelids. There was no frothing at the mouth, as in epilepsy. Soon after this attack he drank a few ounces of milk with apparent relish.

The accompanying chart is an accurate picture of the temperature, pulse, respiration and the weight line for six weeks following from the day

of his admission, including the time of the seizure. A similar attack in another patient was more severe, and simulated more nearly a true epileptic seizure, but examination at the time showed the irido and other reflexes to be normal, and there was no biting of the tongue and no frothing at the mouth.

The third case, upon being approached by the physician one morning, shook hands with him, saying at the same time that he felt sick. After a little conversation he began to breathe heavily and rather rapidly, and a marked tremor was noticed, accompanied by rigidity of the muscles. He clapsed his hands tightly and moved them up and down in front of him for a few moments. At the end of this time the muscular rigidity disappeared, he was quiet and silent for a short period of time, then arose, walked across the hall to within a few feet of the wall, threw his body toward it, striking it with his forehead with considerable force; turned squarely about, was met and conducted to his seat, where almost immediately a second attack came on the same way as the first. The symptoms were similar until near the close of the attack, when the right leg was elevated and a coarse tremor was noticed throughout it; very shortly after a similar tremor appeared in the forearm on the same side. The face was red and somewhat cyanotic, and hyperhydrosis was so great that the perspiration stood out like great beads upon every part of the face. The attack subsided as before, and in about two minutes he got up, walked about impulsively, at the same time grinding his teeth. He sat down and for a third time the muscles of the entire body became rigid and a moment later relaxed a little. Then a coarse tremor was noticed in the left arm, then in the right leg, then in the right arm, and lastly in the left leg. Following this all the muscles beame intensely rigid, while a coarse tremor subsiding into a slight convulsive movement was noticed, the hands being clenched at the same time. The respirations were not stertorous, but at the close of this attack a long forcible respiration was taken and the muscles were rapidly relaxed. The face was cyanotic during this seizure, as before, and this time the hands were observed to be in the same condition. He suddenly got up from the chair, took a drink, and thus ended the third katatonic seizure. Later he felt much fatigued and remained in bed for some time. He says that he is conscious of the onset of the seizures and sometimes retains consciousness all the way through them, that it is impossible for him to control himself; that some irresistible power forces him into these attacks. He has all the other symptoms characteristic of katatonia.

The patient's physical condition may be excellent at the beginning of the disturbance, but there is usually a decline in weight to a marked degree. Among twenty-one cases admitted during the past twelve months, four showed a decline in weight from six to sixteen pounds during the first few months and afterwards gradually increased in weight from fifteen to twenty pounds; six showed a gradual loss up to the present time of from

eight to twenty-eight pounds; four showed an increase of from fourteen to twenty-three pounds, and then a decline of from three to twenty-seven pounds; five increased from five to forty-three pounds, while two remained stationary. The skin often becomes dry and rough, though the hands and feet are cold and clammy; the muscles dimish in size and become soft and flabby; the body temperature is subnormal much of the time, but occasionally goes about the normal line. Whether above or below, it varies as illustrated in the accompanying chart. In what per cent. of cases this variation in temperature is present has not yet been determined. The pulse, like the temperature, is subnormal, variable, slow, soft, diminished in volume, and is easily compressed. The respirations are also slow, and the respiratory movement scarcely perceptible, though at times there may be forced and very rapid breathing. The pupils are occasionally observed to be dilated and the reflexes exaggerated. Constipation and scanty urine are the rule.

With all the foregoing physical and psychical symptoms the diagnosis is, as a rule, quite easy; but it is well for the diagnostician to be always on his guard, for occasionally katatonic symptoms are grafted upon cases of pure alcoholic insanity. Three such cases have been observed in the hospital during the past year. A complete and accurate history of the patient previous to the time of his admission is one of the most valuable aids in making the differential diagnosis in these cases.

Scientific investigation has barely begun in this country, and so far nothing definite is known as to the exact cause of this psychosis. Kraepelin regards it as a deterioration process, and thinks that there are structural changes in the brain.

Among twenty-one rather recent cases, all in the hospital at the present time, six very typical ones are without any assignable cause. Investigation from the clinical side has so far thrown no light upon the subject of causation. Whether cell changes in the neuron alone, or pathological processes in other organs of the body, or both combined, furnish an organic basis for this condition, can only be determined in the future by correlating the findings of the clinician and the pathologist. To this end the institution in which the patients just mentioned have been studied is working. To say that the psychosis is due to any ascertained structural changes at the present time is premature. Heredity is traceable in nine of these cases. Worry is assigned as a cause in two others. Religious excitement, traumatism, defective development, and typhoid fever are given as causative factors in the remaining four.

This lack of knowledge as to the cause makes it impossible to do more than treat symptoms. Until the search-light of science has been brought to bear upon every part of the field in this branch of medicine and has revealed to us the exact lines along which we may travel to attain success in the treatment of these mental disturbances, we must grope our way, guided by experience alone. Placing the patient in bed on rest treatment

is of first importance. There, in quietude, away from irritating influences, physical strength may be regained, the tissues rebuilt and the patient's energies restored to such a degree that perhaps he will be able to withstand the ravages of the awful mental storm that is raging within. While the storing up of strength and energy is going on, the mental symptoms may, and often do, subside, perhaps suddenly, and the patient ultimately becomes an active and useful citizen again. This treatment should be persevered in from a few days to weeks and even months, as the case in hand may require. I have found it of exceedingly great value in all other forms of insanity as well as in katatonia. This treatment enables the patients to go to their homes much sooner and with the feeling that they have received all the care and attention that could be given to them. While the rest treatment is of primary importance, there are adjuncts which must not be neglected. The first of these is good nourishing food, which, if the patient refuses to take of his own accord, must be administered mechanically. The stomach tube, using liquid food, must be resorted to at least twice a day, or, better, three times in twenty-four hours. If internal medication is necessary, and there is a refusal to take it, the stomach tube must be resorted to again as often as is necessary, for days or even weeks, until the patients again take the required nourishment and medicine of their own accord. In a few cases a soft tube was used through the nose as many as six times daily for three weeks with no bad results. Artificial feeding has been employed for four years in one case with every appearance of good nutrition. Occasionally a case continues to fail in spite of proper nourishment, and in a few such I have found that lavage was beneficial, and used one pint of normal salt solution one hour before each feeding time. This treatment was continued for nearly three weeks in one case, and soon after it had been begun the patient's general appearance was noticeably better and an increase in weight soon followed. The use of leaf lard inunctions once in twenty-four hours, preceded once each day by a sponge or tub-bath, is found to be very beneficial. Patients often take on flesh quite rapidly, a gain of one-half, three-quarters or even one pound a day being recorded. Katatonics, however, as a rule, gain more slowly than patients with other forms of insanity. The lard inunctions soften the skin, which in many cases is dry and scaly, and make it pliable, thus relieving the unpleasant sensations which always accompany such a condition. Many of the patients fall asleep after each treatment and rest for an hour or more, waking up much refreshed. Massage goes hand in hand with inunctions; the first aiding in building up the organism, and the latter soothing and at the same time stimulating every cell of the structures manipulated. The sluggish circulation is accelerated and the pale skin made to glow; the starving cells are bathed with life-giving fluid, and thus much is done toward reconstructing the physical being. As much attention should be given to prescribing massage as to any drug. The kind of movement for each particular case, the length of time re-

quired, and the amount of force to be used should be ordered by the physician according to the indications, in the same way that he would prescribe strychnia, nitro-glycerine or other drugs. Used in this way, its value can scarcely be overestimated. Tonics, stimulants, alteratives, digestives, sedatives and hypnotics each have their place and must be prescribed as the special requirements of each case may indicate. Constipation is quite a constant symptom, and in addition to the usual drugs, normal salt solution in doses of from one-half to one pint every four hours is of value, and its action as a diuretic as well as a laxative is worthy of consideration.

Since this psychosis is essentially a degeneration, familiarity with it forces upon the thoughtful man the pitiful futility of attempting to cure and prolong the life of these poor unfortunates, if, at the same time, we are not taking measures to protect our race from the ever-deepening current towards deterioration that must sooner or later engulf it in the vortex of degeneracy. Within the walls of the alms-houses and charitable institutions, we are preserving the life that scattered through the length and breadth of our land, will multiply and bring forth a race both mentally and physically defective. This should not be. We cannot long allow the life-blood of our race to be vitiated in this way and cannot long resist such contamination. Is it not the truest charity to find a method of giving such treatment to every individual who enters the alms-house, a charitable or penal institution, that when they again emerge from its doors they may be useful citizens and live happy lives, but be forever incapacitated from reproducing their kind? Such vigorous treatment of this appalling problem must surely be given by physicians of a future generation.

In conclusion, a few words concerning the prognosis in katatonia might not be out of place. Since it is a deterioration psychosis the patient in the course of a few years, or sometimes earlier, gradually drifts into dementia of varying degrees, after repeated attacks. As a rule, the patients are fairly well endowed mentally previous to the first attack, and during this, and even many subsequent attacks, dementia cannot be detected; consequently there need be no hesitancy in saying that the patient will almost certainly recover from the first attack or even the second or third. After this one should be guarded in giving any definite opinion as to a favorable course, because of the dementia, which is now likely to appear at any time. Sometimes the patients recover in the course of a few days; the change coming on suddenly in some cases, while in others it is more gradual. Again, it may be weeks, months, or even years before recovery takes place. Unfortunately, even after apparently complete recovery, there is always danger of a repetition of the attack, which may occur in a short time, or be deferred for years. Since each succeeding attack increases the liability to dementia, in a majority of cases this becomes grave, and is characteristic of the last stage of katatonia.

SOME OF THE USES OF ELECTRICITY IN GYNECOLOGICAL PRACTICE.

By W. H. WALLING, A. M., M. D., of Philadelphia, Pa.

IN TAKING up this subject, let us first briefly consider resistance and current diffusion. If we use the current in the vagina, uterus, bladder, urethra or rectum, these surfaces presenting as they do less resistance than the dry epidermis, we will get much more pronounced effects from a given intensity compared with the same externally applied; the moisture of these parts materially aiding in the transmission of the current. The size of the electrodes as well as their character will also modify the action of the current, the greatest effect being always noticeable at the poles. If, for instance, we wish to produce a cauterizing effect upon the uterine canal, we must allow twenty-five milliamperes of current for every square millimetre of electrode surface. If the electrode presents ten square millimetres of surface, two hundred and fifty milliamperes of current must be used in order to get the full cauterizing effect. The same effect will be produced whether the electrodes be covered with cotton or not, provided the same sectional area be maintained. If, however, zinc or copper electrodes be used in moist tissues with the anode, the metal will become oxidized to a greater or less extent, thus materially modifying the effect. If too strong a current be applied, or a mild application be too long continued, an eschar will be formed that may prove very troublesome. As a rule, platinum or carbon electrodes only should be used in the uterine cavity. With such instruments and with a current intensity of one hundred milliamperes, a strong cauterizing effect may be produced without danger.

Amenorrhea.—Many cases of amenorrhea being dependent upon anemia, direct stimulation of the uterus is not indicated. In such cases general faradization may be given, and the galvanic current applied by the abdomino-lumbar method, with voltaic alternatives without shock, using from fifteen to fifty milliamperes for five to ten minutes daily or every other day, as may be desired. Later on, if deemed advisable, voltaic alternatives with shock may be given. In some such cases I have given fifty milliamperes by the shock method with good results. It will be better to gradually accustom the patient to the shocks by beginning with mild reversals and increasing from day to day as needed.

In treating cases of suppressed menstruation it is necessary to exclude pregnancy before attempting strong electrical treatment, as there is no more certain feticide than a powerful galvanic or faradic current directly applied to the uterus.

When the patient has recovered strength and the menses do not appear (there being no pregnancy), intra-uterine applications may be resorted to, using the galvanic cathode with a current intensity of twenty-

five milliamperes for five minutes, or a stronger current for less time, sittings being held once or twice a week. In some cases the flow will become established after two or three such applications. Intra-uterine faradization has also given good results, as well as bi-polar faradization of the vagina, alternated with the direct static spark. Of course, any of the treatments just outlined should not be attempted within two or three days, either before or after, of the menstrual period.

Dysmenorrhea.—In some cases the static spark is very useful drawn from the lumbar region, and sometimes general faradization or lumbo-abdominal galvanization will suffice to prevent pain at the monthly period; but some form of intra-uterine electrical treatment may be found to be necessary. This is especially so in stenosis or membranous dysmenorrhea. In such conditions strong cathodal galvanization is indicated. If the stenosis be in the form of a true stricture, mild electrolysis will be sufficient, giving ten to fifteen milliamperes for five minutes, or sufficient to pass through the obstruction. The anode may be placed at any convenient point, say on the abdomen. A case may be cited in illustration: Miss B. had had the cervix dilated until it presented the appearance of having passed through several labors. The canal was patulous up to the inner os, which was only a "pin-hole." The smallest available instrument would not pass, and a special one had to be made for the purpose. An application of only five milliamperes was then made and the stricture easily passed. Larger and larger electrodes were successively used at intervals of one week until the desired size was obtained. (The same method should be pursued in treating strictures of the male urethra.)

If the whole canal be very small, it will better to use a sound that will act upon the entire length at once; but where there are fibrous bands or strictures, bulb electrodes will be preferable. It is not absolutely necessary to wash out the vagina and canal, either before or after such treatment, as the current is aseptic in itself; but it will be as well to adopt all precautionary methods, as in ordinary surgery. After all intra-uterine applications the patient should be allowed to lie down for a while, and in some severe cases, or in debilitated conditions from any cause, it may be better to make the applications at the home of the patient, and keep her in bed. All strong galvanic applications should not be made oftener than once a week or ten days. Time must be allowed for the parts to become thoroughly healed before attempting another cauterization. Many failures have resulted from a neglect of this precaution.

Ovarian Neuralgia.—Where there is no inflammatory condition, but there is a decided ovarian neuralgia to combat, use the faradic current, either with or without the bi-polar electrode. Probably one pole only will be generally used, in which case place a pad on the abdomen and pass the vaginal electrode well up against the painful ovary. Use only a fine secondary coil, beginning with a mild current and increase the intensity up to the extreme limit of toleration and continue the application, without

again increasing the intensity, until the pain subsides. This may take half an hour, or even longer. Repeat when the pain returns, even if it be on the same day. The positive pole should always be applied to painful points, whether the galvanic or faradic current be used.

As to sexual excitement being produced by the current, I may say that I never saw any indication of it in any case. Those who read *The Medical World* for March, 1890, will recall a symposium in my department upon this question, which gave the experience of a number of prominent operators, and all agreed that no such excitement ever followed electrical applications.

The faradic current may be used in the following conditions: Insufficient development of the uterus and ovaries, amenorrhea, subinvolution, superinvolution, displacements, interstitial fibroids, neuralgia, and menorrhagia. The galvanic current may be used in hyperplasia of the uterus, chronic ovaritis, peritonitis and lymphadinitis, pelvic neuralgia, local and reflex neuralgia, mechanical dysmenorrhea, erosions of the neck, and subperitoneal fibroids. Both currents are used in neuralgia, as well as in subinvolution; but in the latter condition the primary faradic is to be preferred.

Erosions.—Use a carbon electrode in ordinary cases; but zinc and copper may also be used. From five to fifteen milliamperes will be sufficient, making the application with the cathode, as a rule; but the anode is sometimes necessary, when zinc or copper may be used as an electrode, in which case one application generally suffices. If not, repeat in five days.

Metritis and Endometritis.—Keith says that "there is nothing to compare with galvanism in the treatment of these very troublesome conditions, many cases of which have lasted for years, having resisted every kind of treatment previously used."

In treating these conditions, use a platinum sound. Introduce it into the cavity of the uterus and place a large pad on the abdomen. Apply the two poles according to the following rules: The positive pole being acid, anti-congestive and hemostatic, is most useful in hemorrhagic, congestive or ulcerative forms of metritis. It antagonizes and prevents the tendency to excessive vascularization, and for the same reason becomes the choice remedy for rebellious leucorrhea.

The negative pole being basic, diffluent and but slightly hemostatic, is, on the contrary, used to excite languid or obstructed circulation or the indurations of chronic metritis accompanied by dysmenorrhea or amenorrhea, and will adapt itself with similar success to other inflammatory processes where hemorrhage does not predominate.

A range of ten to one hundred milliamperes will be sufficiently wide to meet most cases, varying with the necessities and the susceptibility of the patient. Begin with a low power and increase as circumstances may require. Sittings should be from five to ten minutes in duration and be

given once or twice per week, according to conditions and intensity of current used.

In many cases there will be a marked hyperesthesia of the uterine tract, especially of the cervical portion, which should be treated with anodal galvanization. Use a platinum electrode, cover it with absorbent cotton, dip it in a four per cent. solution of cocaine and insert as far as may be necessary, and use from five to ten milliamperes for as many minutes, repeating daily or every other day. The same procedure may be carried out in very sensitive conditions of the vagina, using a carbon electrode in the same manner, but with a stronger current—say fifteen ma., if bearable.

In treating mucous surfaces with the galvanic anode and a bare electrode, the instrument must be kept in gentle to-and-fro motion to prevent its adherence to the parts and subsequent laceration in removal unless the current be reversed for a few seconds.

It must be borne in mind that a weak current applied for a long time is not equivalent to a strong current applied for a short time. In the first case the cells of the tissues can in a measure adjust themselves to the new conditions, having a certain amount of natural resistance, the present and after-effect being entirely different from that produced by a strong current, where, the onset being sudden, the cells are unable to resist, and disintegration results.

It is better not to use a speculum when inserting a uterine sound, but use the finger as a guide. If a small sound cannot be passed, try a large one, as in some of these cases there are folds in the membrane which obstruct the instrument, if small, but over which a larger one will readily pass. Also, if the tip of the sound be too small, melt a little shellac upon it until the desired size be obtained, The shellac can be made as smooth as the metal. I frequently do this when giving intra-uterine galvanization, to prevent action at the fundus.

Menorrhagia.—In a recent hemorrhage, due to a relaxation of the muscular fibres of the uterus, the use of the faradic current is indicated. It acts like ergot, but without the unpleasant after-effects of that drug. The secondary current may be used, with the cathode in the organ, or as a rule, preferably in the vagina, and strong, swelling currents be given by quickly turning on and off the current by means of the controller or by moving the cylinder of the coil rapidly to-and-fro. We must be careful to discriminate in these cases and not attempt to check a hemorrhage with the faradic current, due to an internal lesion of another character.

We will suppose a case of subinvolution with attendant hemorrhage. Using any uterine electrode available, attached to the negative pole of the faradic battery, place the anode on the abdomen and give swelling currents as above directed. At first it will be better to use the primary coil, as the contractions from this coil are less painful than from the secondary, but also are not so strong in character. In either case include the whole coil

in the circuit and regulate the strength with the controller, or if that be not used, by the cylinder over the coil. Swelling currents are of great advantage in relaxed conditions in any part of the body, but in any case, be careful not to fatigue the muscles by too long or too strong an application.

Fibroid Tumors. Bleeding Fibroids.—Only intra-uterine applications with the galvanic anode will avail in the bleeding variety. In some cases the platinum sound will be sufficient, but Apostoli's carbons are better, as one sufficiently large to act upon the whole surface may be used. Introduce the electrode into the uterus, place a large pad on the abdomen (cotton or clay, being used), and act upon the bleeding surface with a current of seventy-five to one hundred and twenty-five ma., as may be deemed advisable. I have never exceeded the latter intensity. The electrode must be gently rotated while *in situ*, to prevent it from "sticking." In the latter case, reverse the current for half a minute, or until the instrument can be easily removed. Forcible removal, without such reversal, will result in more or less hemorrhage.

In treating ordinary fibroids with the cathode, to promote absorption, pain may follow the application and persist for some time. This may be due to the distention of the uterus by the liberation of gases during the cauterization, and it will be better to gently dilate the os, or insert a small catheter, to allow such gas to escape.

Very dense, hard fibroids will yield but little to any kind of treatment. There may be an apparent reduction, but it will be only the result of the absorption of inflammatory exudates, the tumor itself remaining nearly, if not quite, stationary.

Galvano-puncture, both per vaginam and through the abdominal wall, has been practiced, but I have not as yet seen sufficiently good results to warrant a continuance of such procedure.

Pyosalpinx.—Pus in the tubes may be diagnosed in the following manner: If during an intra-uterine application of the galvanic current pain be produced, and such pain is not allayed by the immediate administration of the positive secondary faradic current, pus is present; if it be relieved, pus is not present. This is Apostoli's diagnostic sign, which the writer has repeatedly verified.

Flexions and displacements are to be first reduced, and then the muscles toned up by the use of swelling faradic currents. Treatment may be given every day or every other day, as convenient, one pole in the vagina and the other on the abdomen, the contractions to be intermitted every two or three seconds, the sitting to last for ten to fifteen minutes.

1727 Vine Street.

ANÆMIA.

WITH SPECIAL CONSIDERATION OF THE PERNICIOUS FORM.

By Dr. W. S. Lessenger, Mt. Pleasant, Iowa.

MORBID ANATOMY AND BLOOD PATHOLOGY.

By Dr. Charles Hoffman, A. M., Ph. D., of Mt. Pleasant, Iowa.

ANÆMIA.—It is a very difficult matter to find a satisfactory definition for anæmia, which will cover all the various phenomena manifest in this peculiar and baffling disorder. And since we are confronted with such varying views on the pathology of the disease, it is a still more difficult task to attempt a separate and distinct classification of the different types.

Anæmia may be defined as a perverted relation between the two great functions of hemogenesis and hemolysis, which are concerned in maintaining the normal composition of the blood, and in the normal processes of blood metabolism, or the lysis and genesis of blood elements. Hemolysis should be counterbalanced by hemogenesis. Equilibrium may be disturbed either by an excessive disintegration, or by an insufficient renewal of normal blood.

When Addison, in his famous monograph on "The Constitutional Effect of Diseases of the Suprarenal Capsules," first called attention to this primary blood affection, he termed it "idiopathic." However, there is nothing in the pathology of the disease that justifies us in retaining this name.

Stengel in his review of the terms primary and secondary anæmia, says that "they have been employed to designate diseases dependent upon primary disease of the blood-making organs on the one hand, and those secondary to various organic or systemic diseases on the other, and that a close study of these conditions shows that neither of these classifications are practical or founded on absolute facts, and all anæmias, whether of the primary or secondary group, show good evidence of faulty hemogenesis, together with signs of increased blood destruction. The anæmia, therefore, is a mixed one from the view-point of its origin. The attempt to show that certain cases are primary, and others secondary in the strict sense of these terms, has also failed. For it may be doubted whether any or one of the anæmic conditions with which we are familiar owes its origin and continuance solely to disorders of the blood-making organs." He further states, that "primary anæmia, in the sense of a blood disease, cannot have any existence, notwithstanding the eminent authority that has supported this view." Therefore, basing his use on the authority of Ehrlich and Lazarus, offers as a "temporary" suggestion (excluding chlorosis) the following classification:

"*First.*—Simple anæmia, with the subdivisions of (*a*) acute post-hem-

orrhagic anæmia. (*b*) Simple chronic anæmia. *Second.*—Progressive pernicious anæmia."

Still this classification is not based upon the original causes of anæmia, but simply upon the distinctions in the anatomy and physiology of the blood. However, it will answer as a substitute until we find a better classification. Simple anæmia needs no further comment. Let us now consider the progressive pernicious form.

Symptoms.—The gradual and insidious onset of this disease is noticeable. Patients can rarely fix any date for the beginning of their symptoms. Friends notice that they are looking pale or jaundiced often before any other symptoms appear. Gradually signs of muscular weakness intervene. The patient is easily fatigued on the slightest exertion. There is great dyspnœa and palpitation, with great oppression in the region of the heart on ascending any heights. These are among the earliest symptoms, as a rule, and generally remain the most prominent ones throughout the course sooner or later confining the patient to bed. Gastro-intestinal disturbances are next in frequency. There is loss of appetite, discomfort after eating, nausea, and at times vomiting. General nutrition is not impaired; sometimes there is an increase in bodily weight. The most striking symptom is the anæmic condition, the extreme pallor of the skin, with almost complete loss of color of the mucous membranes. The skin assumes a lemon tint or a very pale, jaundiced color. The principal feature of the pallor is its evenness throughout the skin, the color being the same in all parts of the face, as a rule, without variations on the cheeks or forehead. Nowhere do we see such whiteness of the palpebral conjunctivæ, the gums and nails. The skin is often soft and smooth, resembling that of fatty degeneration. Some cases show profuse perspiration, others none whatever. Œdema of the lower extremities is often present, sometimes sufficient to cause slight pitting on pressure. However, it is ofttimes entirely absent.

The temperature is generally normal; a rise in temperature is a very common occurrence. The fever is of an irregular type, usually with evening exacerbations and morning remissions, the temperature rarely rising above 103° Fahrenheit, and generally subsiding in a few days. In some cases it pursues a continuous course. The febrile type may be intermittent or remittent; sometimes there are periods of a subnormal temperature. Pyrexia probably bears some relation to the hæmolytic process and tends to confirm the toxic theory of the disease. Some hold it is caused by capillary hemorrhages into the cortical heat-controlling centers. The pulse is readily quickened or affected by exertion, and is frequently observed to resemble the Corrigan, or "water hammer" type. There is often violent throbbing of the carotids and fullness in the head.

Cardio-vascular signs are generally pronounced. The apex beat of the heart is somewhat lower than normal and is situated more to the left, which may be confirmed by percussion. At the præcordium may be

heard an intense, glowing, systolic murmur; at times this murmur is of a grating character, and often mistaken for friction sounds.

Symptoms of organic nervous diseases are much more common in women than men. Headache is generally the only form of pain present in this disease. The absence of other pain is a noticeable point. Some cases experience severe neuralgic pain in the arms on exertion only. Epistaxis and bleeding of the gums frequently occurs. Occasionally the tissues of the mouth get into a very unhealthy condition, with ulceration and loosening of the teeth, as in scurvy. The tongue is sometimes unusually smooth and shiny, but as a rule, it is clean.

Patients are usually more or less despondent and are possessed of a lassitude which makes all labor wearisome.

Morbid Anatomy.—At death, in the majority of cases, the body appears fairly well nourished. Panuculus adiposus is often of a deep yellow color. There is striking pallor of surface with petechiæ at times over lower extremities, with œdema. There is serous effusion in the peritoneal and other serous cavities. On the surface of the heart petechial hemorrhages are often noticed. There is usually a fair amount of epicardial fat. The fibers, if examined under the microscope, show the various stages of fatty degeneration. Lungs are usually bloodless. There is at times œdema of lower lobes and a few petechiæ beneath the pleura. The stomach generally presents marked evidence of glandular atrophy, with occasional thickening of the submucosa. Liver, as a rule, is enlarged and the cells are found in all the various stages of fatty degeneration. The outer zone of the lobules shows deposits of hæmosiderin; the spleen is variable in size and consistency. The pancreas and suprarenals show no changes. The brain is very anæmic, and on its surface is often seen evidence of subarachnoid hemorrhages. The cord often shows sclerosis of the white matter, especially in the posterior columns. Again, there is miliary sclerosis scattered irregularly throughout the cord. The marrow of the long bones shows signs of increased hemogenetic function, viz., the reversion to the fœtal type of red marrow.

Pathology.—The pathology of this obscure disease is of great interest. Hunter has probably given the best exposition so far, viz.: "That pernicious anæmia signifies a definite group of clinical and pathological phenomena dependent upon a special form of hemolysis, induced by toxic agents absorbed from the gastro-intestinal tract by two forms: First, excessive production of toxic material in the intestinal tract, or, second, insufficient internal secretion of the ductless glands, viz., thyroid and suprarenal capsules, etc., to neutralize the toxic products of metabolism." The reasons for this may be briefly summed up as follows:

First.—"There is abundant proof that hemolysis does occur in this disease, which is proven by the condition of the blood, showing deformed and disintegrated corpuscles, and the readiness with which hemoglobin escapes and the abundance of microcytes."

Second.—"The presence of an excess of pigment in the liver, spleen and kidneys; pigment in the form of hæmosiderin ron granules loosely combined) in the cells; in further support of this is the elimination of iron in the urine, and occasional excess of pathologic pigments in that fluid."

Third.—"Hemolysis occurs within the area of the portal circulation, and not in the systemic, as proven by the condition of the spleen and the accumulation of hemosiderin within the hepatic cells of the outer zone of the lobules, and by the absence of hæmoglobinuria. For experiments and researches have conclusively proven that when hemolysis takes place in the general circulation hemoglobinuria results; in pernicious anæmia, however, the pigment, if eliminated by the kidney at all, appears in the form of iron granules or as an excess of other pigmentary matter, regarded by some as pathological urobilin, by others as a mixture of urobilin and hæmatoporphyrin." This theory is further sustained by the fact that in those forms of anæmia which most nearly approximate to it, viz., those due to other toxic agents, to long and repeated hemorrhages, to blood parasites, as in malaria, to cancer, or to syphilis, that such a marked excess of iron is at no time found in the viscera, especially in the liver, as there is in this disease. At the present state of knowledge it is impossible to deny that a hemolytic process, closely allied to that of pernicious anæmia, occasionally intervenes in the course of grave organic disease, and especially chronic gastro-intestinal disorders. It would be incorrect, however, to speak of the accidental supervention of the pernicious process as "symptomatic" anæmia; it should be regarded as a complication rather than a regular feature of the original disease. The doctrine of toxic origin receives further confirmation from the degenerative lesions found in the spinal cord, as already mentioned. Hunter has recently studied seven cases of pernicious anemia and draws the following conclusions from his observations:

First.—"Pernicious anemia is a special form of chronic blood-poisoning, a toxemia."

Second.—"It is the result of a special infection of the digestive tract, especially of the mouth and stomach, and probably, although to a less degree, of the intestines."

Third.—The chief source of infection is through the mouth, from long-continued and neglected cario-necrotic conditions of the teeth, and sometimes possibly from stomatitis arising from other causes."

Fourth.—"The usual effect of this infection is a chronic infective catarrh of the mouth and stomach, which may in time lead to deeper-seated changes, viz., ulcers of the mouth and tongue, chronic glossitis and atrophic changes in the tongue, and chronic gastritis with atrophy of the gastric glands."

Fifth.—"Evidences of the infectivity of the organisms of dental decay are overwhelming, and in suitable cases the infective nature of the resulting catarrh of the stomach can also be demonstrated."

Sixth.—"Infection is chiefly streptococcal, and possibly derives its special characters from being of a mixed character."

Seventh.—"Such infection the more readily occurs if the stomach or intestines be already, from any cause, the seat of disease."

Eighth.—"The gastric and intestinal irritation (sickness, retching, vomiting, looseness of the bowels and diarrhœa) so often noticed, and which I find to be even more common than is stated (being recorded in close on to eighty per cent. of cases), is the local effect of this infective catarrh, while the excessive destruction of blood taking place in the portal area, is the result of the action of the poisons in the blood."

Ninth.—"The fever so commonly met with is not an accidental occurrence, the effect of weakness, but is a feature of the disease, a result of the infective process itself, and its variations correspond to the variations in the activity of that process."

Tenth.—"Such variations are common from week to week, sometimes from day to day, in the progress of the disease, even when it is running a fairly progressive course."

Eleventh.—"In addition, however, the course of the disease toward the fatal termination is often marked by one, sometimes by *two* periods of marked improvement lasting, it may be, many months or a year or more, followed by relapses. This character of the disease I have come to regard as the result of a relative immunity, unfortunately only temporary in its nature, conferred by the disease itself to an immunity accelerated and greatly strengthened for a time by a suitable medicinal treatment, notably by the administration of arsenic."

Twelfth.—"The above conclusions suggest certain new considerations in regard to treatment, of which the chief are, viz.: (1st) minute attention to the hygiene of the mouth, and especially of the teeth, with the immediate removal of every source of infection there; (2nd) stricter antiseptic treatment of the stomach and intestines; and (3rd) antitoxic serum treatment, with the view of antagonizing within the blood itself the poisons absorbed into it."

We have no reason to admit that in every case of pernicious anæmia, chronic gastritis is capable of producing such severe systemic poisoning as Hunter has noted, and, again, knowing the tolerance of the economy to gastric disorders, and the rarity of fever in those disorders, we are loath to admit that in this disorder fever should be so regularly present.

Adami's theory "that pernicious anæmia is associated with subinfection" has not met with any general acceptance.

Diagnosis.—The most casual observation may be sufficient for the recognition of this disease. It usually develops slowly and insiduously, the patient presenting the ordinary symptoms of anæmia—pallor, weakness, dyspnœa, palpitation, venous murmurs, loss of appetite and impaired digestion, dizziness and fainting, slight œdema and hemorrhages. The general appearance of the skin, the pallor of the mucous membranes, and

the evident breathlessness are sufficient indications of a diminution in the amount of blood, or some of its principal constituents, viz., the red blood cells or the coloring matter of these cells. The pallor in these cases is readily distinguished from the whiteness of pulmonary tuberculosis, the earthy hue of a cancerous cachexia, the muddy tint of malaria, the bronzing of malasma suprarenalis, the complexion usually seen in chlorosis, or in sufferers from internal hemorrhages, and in cases of gastric organic diseases, or in various toxic anæmias.

The final diagnosis, however, depends upon the examination of the blood and the clinical course, rather than from any thought of the possible cause.

Pathology of the Blood.—The patient is at times so bloodless that it is difficult to obtain a sufficient amount for examination. The principal feature is the olygocythemia, and this depends upon the severity of the disease process. The number of corpuscles may be as low as one million per cubic millimeter, and may even fall as low as five hundred thousand. Quinke reported a case with one hundred and forty-three thousand. There is no corresponding diminution of leucocytes; in some cases they quite frequently exceed, in the latter stages, the normal amount. Hæmoglobin, although considerably reduced, is not proportionate to the reduction of corpuscular elements. Microscopic examination reveals loss of tendency to rouleaux formation, and the cells display a marked alteration as to size and shape; they assume the various forms of poikilocytis.

Megalocytes and microcytes are both present. The principal feature, however, is the presence of nucleated red cells, suggestive of reversion to the reptilian type. Neucleated red cells have been designated, according to size, as normoblasts, megaloblasts and microblasts. Endoglobular changes of corpuscles also occur, but the principal feature of the blood in pernicious anæmia is the readiness with which hæmoglobin separates from the cells. Leucocytes show no constant change as to variety. There is nothing in the blood which would serve to distinguish pernicious anæmia from anæmia due to intestinal parasites.

Prognosis—The prognosis of pernicious anæmia, as the name implies, is very grave. It usually runs a progressive course with remissions, generally terminating in death. Reports, however, show some cases that have recovered, but in a great majority there is only a temporary improvement. The average duration of cases of pernicious anæmia in this country is from one to three years, rarely longer. In the remissions of the disease the blood count may rise to normal, and the patient seem almost well, but it is very important at such times to be prepared for the inevitable relapse, and not to stimulate false hopes of recovery.

Treatment.—There is very little to add as to treatment. Numerous remedies have been lauded as useful in this disease, but we have yet to discover a specifie. Among the remedies most prominently mentioned are iron, arsenic, bone marrow, extract of spleen and thymus gland, intestinal

antiseptics, massage and hydrotherapy, hygiene and dietetics. Bone marrow in some cases seems to cause a slight improvement in the corpuscles and hæmoglobin. Extract of spleen and thymus have been urged, but without success in most cases. Iron still holds a place with many. It is credited with stimulating the bone-marrow and the other blood-making organs. Some action of this kind is also probably due to arsenic, which belongs to the class of remedies capable of acting as anions, and being a powerful oxidizing agent it in this way exerts an influence upon the toxic products of the intestines and thereby reduces the toxicity in the portal circulation.

Much has been written of late upon the use of concentrated saline solution in this as well as other kindred blood disorders. Its physiological action is reputed "to increase the volume of blood, lessen the specific gravity, stimulate the cardiac ganglia and accelerate circulation. Through the increase in the volume of the blood the arterial tension is raised, and a larger blood supply is carried to the vital or blood-making organs. The stimulation to the nervous centers is very marked, sometimes causing great excitement. The functions of the skin, kidneys and intestines are greatly stimulated, and all the organs functionate better under its use; it does not coagulate blood, but, on the contrary, dilutes and keeps it in a fluid state. It has a distinct stimulating effect on osmosis, and thus may influence the excretion of urine and the other secretions of the body. The number of red corpuscles are distinctly increased."

The best results obtained in my experience have been in the combined use of the iron, arsenic and saline treatment, with strict antiseptic precautions in the mouth and intestinal tract, giving special attention to better hygienic conditions and a carefully regulated diet, not forgetting hydrotherapy. Iron acts best in the form of Blaud's mass, either in powder or capsules. Arsenic in Fowler's solution, beginning with the minimum dose and increasing to tolerance, which is noted by the condition of the eyes and gastric symptoms. The saline solution is used in the strength here given: Calcium chloride, 0.25 gm.; potassium chloride, 0.1 gm.; sodium chloride, 9 gm.; water, distilled, one liter. Used either as an enema or an intravenous injection two or three times a week at the times of greatest oppression. This treatment has served me in most cases to seemingly supply a new lease of life—for how long I am yet unable to say. In two cases, however, I have observed a general improvement the past fifteen and eighteen months. Remissions have occurred, but of short duration, and on the whole the trend of the case has been toward relief. I have tried these remedies singly, but with less pleasing results than in the combined treatment. I fear there is little to be hoped for in Hunter's suggestion of an antitoxic serum treatment; and we have certainly failed to get good results from the intestinal antiseptics alone, as recommended by him, and very little from the massage treatment advised by Mitchell. That this disease is becoming more prevalent there can be no doubt, or we

are becoming better qualified to recognize the disease, especially in its incipiency. At any rate, there have been more cases recorded in the past decade than in any of the preceding ones.

It behooves us, therefore, to search more diligently for the cause of this disorder, and to look closer to our pathology, especially the blood, and to study more carefully for a better method of treatment, particularly as to prophylaxis, with the earnest hope that the anæmias may soon be considered among the already large number of curable diseases.

OTOMYCOSIS.

By Robert M. Lapsley, M. D., of Keokuk, Iowa.

THE growth of vegetable parasitic material in the ear in the form of fungus growths complicates quite a good many cases of ear disease, as well as also occurring as a primary disease not uncommonly.

The cause of this trouble is generally some form of moisture in the external auditory canal. It may be a discharge from the middle ear producing the moisture, or it may be due to oils introduced in the ear by the laity for various reasons. These oils become rancid and form a favorable place for development of fungus. Many cases cannot be traced to these causes. They may often occur in a malarious climate, and a low lying, moist district may have these cases developed with frequency as a primary disease. The most common fungi in the ear are the aspergillus niger, flavus and fumigatus, although others are found at times.

The fungus generally grows very rapidly. An ear cleaned one day will usually be filled the day following. The patient will have considerable discomfort, and oftentimes marked pain, which may vary from day to day, and even disappear for a time and then return again, the entire duration being unlimited.

Hardness of hearing generally accompanies it, and often develops into marked deafness. Tinnitus aurium is also present. On inspection the ear is found filled with masses of something that may resemble either hardened wax or pus, and, in fact, oftentimes accompanies either one of these accumulations. On removal, if a primary case, the usual appearance of a dirty gray membrane is present, and the characteristic appearance of the spores is readily seen with the microscope. Both the macroscopic and microscopic appearance is plainly marked. In case it surrounds a plug of cerumen it may be easily overlooked, or in case there is a chronic middle ear suppuration, the fungus growth may not be thought of.

Untreated, or treated without an understanding as to the character of the trouble, it may last indefinitely, while with proper treatment the duration may be cut down to a few days. It yields very rapidly to treatment.

The treatment consists first in the removal of foreign material from the canal by means of the syringe, and forceps if necessary, and following that the use of an antiseptic. Bichloride of mercury, 1 to 5000, allowed to remain in the canal fifteen minutes twice a day, or alcohol used in the same way, always after cleansing, will generally cause the symptoms to disappear in two or three days. Then the treatment continued several weeks will prevent them from returning.

I wish to quote the following rather remarkable case: J. A. presented himself September 22, 1899, with history of left ear having slight discharge a month ago. Ear grew worse until a few days ago it became quite painful. For three or four nights the ear has been so painful as to require morphine to produce quiet. Is entirely deaf in ear, the canal is badly swollen and tender, even to side of face and neck. The general health and nerves of the patient are entirely shattered.

Stringy white substance that was quite elastic and resembled nerve structure was removed in quite long strings. The diagnosis of otomycosis was ventured on, although the symptoms were almost too violent, and the ear was cleansed and alcohol treatment used. The patient was easier from that time, and rested fairly well afterwards, and symptoms gradually abated until canal had normal appearance, and hearing was normal in a few days. The alcohol was continued for some months, now and then, to prevent recurrence, and the case has not relapsed.

Russia and the Alcohol Traffic.—In Russia, at present, an attempt is being made by the government to limit the sale of spirits and reduce the number of inebriates.

The methods are, first, to replace drink houses by tea houses, increasing the tax on all places selling liquors.

Second, by organizing asylums and forcing drinkers to be confined in them, and by the encouragement of societies of temperance by subsidies or other means.

The total consumption of tea at present in Russia is about one pound per year for each inhabitant, or 106,000,000 pounds, and the cost thereof is $88,000,000, against $550,000,000 for brandies and other alcoholics.

The consumption of tea is increasing rapidly.

Teaching the Blind to See.—According to a Vienna medical journal, Dr. Heller, the director of one of the local blind institutions, has succeeded "in enabling a blind boy of seven years of age, to distinguish objects, and even to read." He claims that this is the first instance on record in which it has been found possible to impart elementary instruction exclusively through the sense of sight, to a child previously incapable of seeing. He attributes this result "to a great restriction of the field of vision in the case of a patient who manifested considerable sensitiveness to light." The method adopted was as follows: The boy was first exercised in localizing a point of light in a room which was otherwise perfectly dark. Articles with which he had already become familar by touch were then placed within the narrow illuminated circle, and he was called upon to distinguish them by sight alone. When the light was passed through colored glasses, the child noticed the difference. By associating the names with the various colors, he was gradually taught to recognize them. After he had acquired the power of distinguishing geometrical forms, he learned to recognize letters and numerals. In the second stage of the treatment the use of the sense of touch was entirely excluded. At present, after fourteen months' practice, the boy is able to read with the naked eye, and to recognize, localize and distinguish colors, forms and objects at steadily diminishing distances.

This is no doubt valuable but had the child been absolutely blind—had he been unable to ascertain by means of his eyes where the light was in the dark room—Dr. Heller's methods would have had no result. In other words, his process is only practicable with children who are partially blind, although that partial blindness may approach total blindness very closely.

The Prevention of Phthisis.—In the old Kingdom of Naples, which included the present city of the same name from 1782 to 1860, drastic measures were resorted to in order to exterminate tuberculosis pulmonalis. A physician who omitted to report a case was fined $200, and if he offended a second time, he was banished from the kingdom for a year. The ceilings, walls, floors, doors and window-frames of the rooms in which consumptives died were removed and burned. Bedding and furniture shared the same fate, and the dwellings could not be occupied for a year after the death of the patient. In consequence of these stringent laws a family

with consumption in its midst was regarded as a nuisance and was shunned. The results of these measures were not encouraging, for from 1860 to 1863, the death-rate from phthisis in the city of Naples was one-sixth or one-seventh of the total number of deaths (Spatwari and Semma, in 43th Vol. of *Brit. and Foreign Med.-Chir. Review*, p. 112). There was one thing, however, which was not done in Naples. The sputum was not recognized as the *causa causans* of the contagion, and consequently no attempt was made to dispose of it properly. In Buffalo, an ordinance prohibiting persons from expectorating on the streets and sidewalks has been rejected by the aldermen, but even if it were passed consumptives would expectorate into their handkerchiefs, which would, of course, be equally objectionable. The mortality from phthisis has not appreciably decreased since the discovery of the Koch bacillus in 1882. The process of natural selection—the elimination of those most susceptible to the disease—has been causing a slight decrease for many years. The real solution of the problem is neither the formation of anti-consumption societies, nor ultra-stringent regulations concerning anything *except the sputum*, but a gradual educational process by which the public will learn that the phthisical diathesis is markedly hereditary, and that men and women belonging to tuberculous families ought not to marry. This method, although slow, is very sure; by a similar educational system, both sexes have learned to avoid contracting marriages with individuals who, while not by any means insane, are "a little queer at times."

Bottled Tears as Medicine.—A physician who has visited Persia says that the natives still believe that human tears are a remedy for certain chronic diseases. At every funeral the bottling of mourners' tears is one of the chief features of the ceremony. Each mourner is presented with a sponge with which to mop his face and eyes, and after the burial these sponges are presented to the priest, who squeezes the tears into bottles.

Cures for Mosquito Bites.—The *Bulletin General de Therapeutique* recommends the following lotions to relieve the irritation of mosquito bites: A ten per cent. solution of menthol in water. This is only suggested if a more elaborate lotion is unobtainable. Commercial solution of formic aldehyde, five grams; alcohol and water, each ten grams. Apply several times during fifteen minutes, and allow the liquid to evaporate. Blotting paper soaked in the solution may be used, if desired. This remedy should not be applied to delicate parts of the skin, nor to places where the skin is broken, on account of its caustic character.

Why Do Dogs Swallow Stones, Sticks, Etc.?—It has recently been asserted that the presence of foreign substances like pebbles, glass and feathers in a dog's stomach show that the animal was affected with rabies. This is by no means correct. The dog is probably suffering from some

stomach trouble, which may have given it convulsions and caused it to act in a manner which gave rise to the belief that it was rabid. When a dog is suffering from one or a complication of the disorders of the stomach or intestines, it will swallow bits of almost anything which comes to hand, hoping to find a counter-irritant and to get relief. A Baltimore physician, whose name I cannot remember, has expressed the opinion that the mere fact of finding foreign substances in a dog's stomach, although no proof of rabies, may indicate cerebro-spinal meningitis, which in its outward form resembles violent rabies, and is apt to make the dog behave somewhat in accordance with the popular conceptions of rabies. The fact that a dog swallows grass, and occasionally a small stone, does not indicate any serious disorder. The acids in the canine stomach are very strong and very plentiful. Sometimes the lining of the stomach becomes so charged with these acids, in excess of the quantity required to digest the food upon which the animal has been living, that the sufferer seeks an irritant which acts upon the walls of the stomach and causes an artificial flow of the acid. Grass is the counter-irritant provided by nature, and the one the dog prefers. It does not choose smooth grass, but that which has prickly edges and tickles the little vessels containing the acids. If grass is not around, most dogs will eat hair, which never does serious injury. When neither grass nor hair can be found, the poor animal will swallow other substances, such as stones and wood. The latter is dangerous.

The moral is watch your dog and attend to any signs of sickness. Do not assume that he has rabies because he swallows foreign substances.

"To Regenerate the Human Species."—According to a Paris dispatch to the New York *Times*, a certain Count St. Ouen de Pierrecourt, who died recently, bequeathed to the city of Rouen his fortune of ten million francs—$2,000,000—on the novel condition that the city shall annually give a marriage present of 100,000 francs to a couple of giants, in order to regenerate the human species. The candidates are to be medically examined, and the healthiest couple must be chosen.

Unfortunately, gigantism and health very seldom go together. Had the French gentleman left his millions for the purpose of scientific education, much more might be accomplished, for even if a nation of persons of great size could be produced—which is improbable—they would present most of the characteristics of the giants of today, many of whom are monstrosities.

Concerning the Size of Soldiers.—The untrained big man can beat the untrained little man at fisticuffs or in a wrestling match, but in trained armies weight has no advantage. The small-limbed Romans defeated the large-limbed Germans as long as their armies were recruited from the cities and villages of Italy. The wiry little Roman, from all accounts, must have been one of the best soldiers who ever lived. It was after Rome

had enlisted the big barbarians in thousands that she was defeated in battle. The slight and pallid Saracen drove the picked soldiers of Europe out of Palestine. If armor is any test, the heroes of the middle ages were comparatively little men. Of the men who fought at Jena in 1806, the Frenchmen were probably ten per cent. smaller and lighter in weight than the Germans, Pomeranians, and Poles, all of whom were defeated by them.

The native regiments of the British army in India are men of great size, yet during the mutiny of 1857, the Englishmen, who averaged two inches less in height, thrashed them very thoroughly. It is true, of course, that the latter had the benefit of the white man's brain, which is the best brain there is. The Japanese defeated the Chinese, and experienced officers who have watched the little Japs in action believe they would be able to beat the Russians. The "light" English regiments, such as the one called the Rifle Brigade, have shown in South Africa that they are the best in the service. The low stature of the Zouaves (the most distinguished French fighters) has often been commented upon, but they are first-class soldiers. The truth is, that weight and height have very little to do with fitness for soldiering, and men of moderate size are far better soldiers than men of six feet and over.

A New Kind of Sulphur Bath.—Harrogate, in Yorkshire, England, has a novelty in the way of a sulphur bath. Briefly described, by the application of electricity in a sulphur bath a man is converted into a "sulphur-coated" being. In other words, the electricity, acting upon the sulphur latent in the water, deposits the latter upon the skin of the patient in much the same way as electrolysis covers metallic goods with a plating of gold or silver. This process, according to the local practitioner, whose experiments have led to its discovery, is much superior to the ordinary sulphur bath in certain skin affections. The benefit, he says, is both greater and more rapid, for he finds that the deposit of sulphur actually placed upon the skin by electric influence is much more effective and curative than that nascent in the water. It is, in fact, driven into the skin, and thus keeps up the curative action until the next bath. The physician's experience with some of his patients is cited to support his theory, and the report of a chemist is added to show that an electric current passed through water will liberate sulphur at the positive pole by direct electrolysis of the sulphides and of the dissolved sulphuretted hydrogen, and so lead to the deposit of sulphur upon the skin.

Is not this method of treatment worthy of investigation by physicians who make a specialty of skin diseases? At any rate, the accuracy of the above-named facts could be determined.

The Callosities Upon Horses' Legs.—The writer will be under obligations to any reader who will furnish him with any hypotheses concerning the origin of the callosities upon all the legs of the horse and upon the fore legs of

the ass and the zebra. They are not the remnant of the inner toe, as some writers would assert, for if they were they would not be above the so-called "knee" (wrist), as they always are on the fore legs. Moreover, the inner toe has been the first to disappear in all ungulates. It has been suggested that these callosities are the remnant of an odoriferous gland, but the writer has not been able to find anybody who has examined sections of them microscopically in order to ascertain if they resemble glandular tissue. This should, of course, be done by somebody who is familiar with the appearance of such tissue under the microscope.

Rings Through the Tongue.—The Rev. T. R. Buckley, of the Church Missionary Society, who has been working in Central Africa, states that the unmarried girls of the "little-known tribe, the Bakedi, wear rings through holes in their tongues." He gives no further information, so we are unable to form any opinion as to how it affects their speech. I hope to return to this subject upon a future occasion when more definite information can be given.

The Cure of Lupus by Light.—Dr. Finsen, of Copenhagen (Sweden) claims to have discovered a remarkable cure for lupus. He has found that light destroys the pathogenic power of the micro-organisms and that nature does the rest. The rays of an electric lamp are directed to the diseased part continuously for three hours at a time, and in the end what appears to be a complete cure is brought about. The ulcers disappear without treatment. Sunlight would probably do equally well, but three hours' continuous sunlight is not obtainable every day in most large cities, and electricity has to be resorted to as a substitute. Every beam of light contains chemical, heating and luminous rays. For Dr. Finsen's purposes the heating rays are not needed, and the electric beam is passed through an aqueous solution so as to intercept these and permit the light without heat to fall upon the patient's face. This treatment is now said to have passed the experimental stage, and it is being used in at least one London hospital. Equally good reports are given by physicians of New York and other cities of this country.

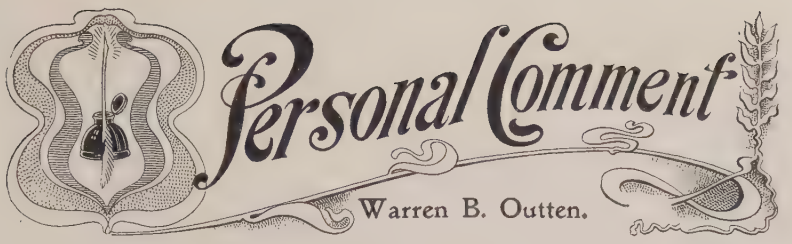
Smoking Contests.—Two hundred and sixty-six smokers have lately taken part in a smoking competition organized by some enthusiasts—or lunatics—in Belgium. The first prize was awarded to a person named Devos, who kept his pipe alight for one hour and fifty-three minutes. The second and third prizes were given to individuals who smoked incessantly for one hour and forty-three and one hour and forty-two minutes respectively. Last year a "record" was established by Mertens, of Louvain, whose time was two hours and three minutes. This individual is called the "champion" of Belgium. It is proposed next year to hold an international contest for the "championship" of the world. Let us hope that

Americans will show their sanity by refusing to compete. Smoking in moderation—say three medium sized cigars a day—probably does no harm to any man in ordinary health. But there is no more sense in a smoking contest than there would be in an eating or drinking competition.

A Glimpse of Ancient Medicine.—There is little doubt that the Romans gave medical qualifications to women, but we have been unable to ascertain how numerous the lady physicians of the Latin era were. A woman practitioner possessed a cure for colic which consisted of snails, burned horn and wine. A male physician is believed to have paid a considerable sum of money for this prescription, which is no more absurd than many of the "drugs" mentioned in the homœopathic pharmacopœia of the present day. Unless our information is seriously at fault, tincture of bee-stings (apis mellifica) and a "medicine" made from bed-bugs (cimex lectularius) are still a nominal part of the materia medica of the men who profess to follow Hahnemann. The chances are that they are not used.

A Roman physician is reported to have cured a young man of blushing by causing him to eat some part of the flesh of a hawk, and another doctor prescribed the powdered lung of the hawk for asthma! In some of the hospitals, however, measures which are scientific were employed. For example, story-tellers were paid to amuse the patients and to keep their minds away from their diseases. Why cannot we have both musicians and readers in our modern sanitary hospitals? No neurologist doubts that these aids to medicinal treatment would be valuable in some nervous disorders; and one result of neglecting them is that the quacks resort to them, and, *mirabile dictu*, occasionally cure a case without dieting the patient, without any hygienic treatment, and without drugs.

The Excretion of Arsenic by the Hair.—From recent researches of Prof. Gautier, of Paris, we learn that the hair acts as a means of exit of arsenic from the human system. It seems probable that arsenic may be detected in infinitesimally small amount, of course, in ordinary hair, but when arsenic is taken medicinally, for example, an appreciable amount of it is revealed by an analysis of nature's head-covering. In a case of arsenical poisoning by beer in England, the proportion of the drug in hair rose to one part in ten thousand. While the fact of the hair apparently forming a natural channel for the excretion of arsenic is notable, it may readily be understood that this line of research may be of value in other directions. The skin is well known, of course, as an organ whose chief duty is connected with the excretion of bodily waste, but the idea that the hair shares this function is novel. In cases of alleged murder by arsenic the toxicologist may find in the analysis of the hair of the victim a corroborative proof of some importance.



A Few Words Concerning the Sociological Position of the Physician.—The position of the physician, from a sociological point of view, is one of well-defined honor and respect. Viewed from the standpoint of commercialism, he amounts to *nil*. Politically, his influence is negative. His influence is felt only in the same way that influence of the unaspiring and loyal citizens is felt. He is law-abiding, honest and patriotic. View the physician comparatively to members in other learned professions, as to his usefulness and the rewards of that usefulness, he is only accorded a position of mediocrity and well-confined influence.

The power of the physician's intellect, no matter how great, only reaches a limited circle and never assumes the rightful position which an intellect of equal power attains in many other callings. The world assumes, for some unknown reason, that when a man becomes a physician, either of prominence or otherwise, that he is only fitted for the particular calling of medicine. Rarely, indeed, is the physician consulted concerning questions of importance to the State, even though his intellectual capacity and fitness may be infinitely superior to a great majority. There is no denying the fact that to the ambitious, medicine offers but little that the ambitious seek: power and influence are not the rewards to a votary in medicine. Fame, indeed, rarely crowns the most intellectual and superior efforts of the physician, and even when it does after a lifetime of the most arduous effort, he is less known to the world, less known to the general public, than some vaudeville artist.

It is a remarkable though an eternally patent truth that a soldier or sailor will attain more fame with less intellectual effort than any other calling on earth. A single brilliant episode, where there is less true intellectual effort, less mentality, less of all that goes to make a truly great man, will be emblazoned over the face of the earth, while a lifetime of brilliant, unceasing and powerful intellect in the calling of medicine will only make this person known to the student and the narrow confines of some particular country. His (the physician's) reward in honor, fame and finance is confined to narrow limits. The physician faces in his calling the antithesis of all of life's paradoxes; he is supposed to heal the sick and prevent death, and in the end all men die. He combats disease and death, while God's eternal fiat stamps death upon all that has life. Fact, of course, shows the benefit of medicine. Still, the doctor, with all

the power he has, is never able to stay the hand of death when nature reaches the culminating point. So thus at best, view the physician in the broadest light, view him from the most favorable point of view, he yet remains unsuccessful. The physician may heal mankind, accomplish wonderful results, but his power suggests possibilities unattainable, hence an opinion in mankind places him in a position where the true and real merit of his accomplishments is rarely if ever viewed in its true light. He may save a life to-day, but lose it to-morrow; thus a like effort is lost in a human-like way. Man has grown to admire the destructive elements of life; his worship must have a background of tragedy and death.

There is no doubt but that there are causes which lead to the present position of the physician, and to our minds they can be traced in many ways. The physician of to-day should be the most altruistic of all persons, and yet he is far more egotistic than members of other intellectual callings. We say it, for we believe that it is the truth, that there is less of altruism in the real meaning of the word amongst the medical profession than any other profession, and yet their calling would seem to be based on altruism. Go to any community, even the most learned and intellectual, and it will be found that the medical profession of that community is racked with bickerings and jealousies. They form societies and gatherings for the sole benefit of themselves alone; while they seek to benefit others, yet the benefit of self is the motive. It is established through ages of action and become almost proverbial that the doctors of medicine must differ. Medicine can never assume the position which the intellect of its members entitle it to assume, until the best of altruistic feeling pervades it. When the medical profession will unite in an altruistic endeavor, then will it become a body which the world will honor; yes, honor commensurate with the nobleness of the accomplishment. Christ, the master, embodied the true idea which the physician should copy. He was the personification of altruism. Self had no thought with Him. He loved and labored for others. The social body in our present civilization offers a field grand and multitudinous for the display of the most worthy and beneficial altruism.

Let the medical profession drop its egotistical standard and embrace progressive altruism, and it will become a body potent. Let medical societies, instead of confining their proceedings entirely to the discussion of medical cases, study the sociological factors with which they are surrounded. Let them strive in the field of prevention and see if they cannot lessen crime, vice and misery by study and suggestion. We believe that if any medical society will honestly strive to better the community in which they live, they will be raised in the estimation of that community. Let them study the conditions and surroundings of the viceful, the poor and the needy. The State should enlarge its effort in an eleemosynary way, the chronic inebriate ought to be brought under compulsory treatment. There ought to be inebriate asylums, there ought to be maternity hospitals where the pregnant woman can be taken away from squallor and

viceful surroundings, and a coming progeny possibly benefited. On all sides exist conditions which the intelligent physicians with united effort can benefit their country, community and themselves.

Star Dust.—Man, at least the female part of him, takes more trouble in looking earthward for pins and dirt than for stars. From recent researches and investigation, it would seem that cosmic, or star, dust has an important bearing and influence upon things terrestrial. Our earth, according to some scientists, received its first cell life from star dust. If the assertion of these scientists be true, all the life which goes on here on earth is the result of moss-grown fragments dropping upon this earth from the ruins of a celestial world. Star dust is a regular visitant to this mundane sphere, for it is not unusual for various portions of the earth to be caught in the throes of cosmic dust, during which time rich and rare metastatic elements flood the atmosphere. Ships at sea under a cloudless sky have been known to accumulate quite a quantity of star dust, its composition being totally unlike that of volcanic or flue dust, and is of meteoric origin. Here is a field of investigation for some eager student to benefit humanity who can tell since we know that the mosses may undergo immensely low temperatures and yet, under proper conditions, germinate into life. May not this star dust convey some form of microbic life and be the occasion of terrestrial disease? Anyhow, the study of star dust is open for future investigators. Perhaps the bacteriologists may find some new form of germ life existing in star dust. It is sad but true, even with medical investigation, that the terrestrial is studied more than the heavenly. But then what the heavens shower down the earth must take, even the dirt from the stars.

Cremation and Crime.—The increase in popularity of cremation as a means of disposing of the bodies of the dead, and the thoroughness of the process in destroying any evidence of crime about the body, should such evidence exist, must needs interest any municipality where cremation is permitted and encouraged.

The only precaution practiced is to have a burial certificate signed by some physician in good standing, together with a request from some friends or relatives that they desire the body cremated.

The body is thereupon cremated, and should any suspicious circumstances arise after the death of the individual, but very little room for investigation would be found.

MEDICAL SOCIETIES.

The St. Paul Meetings.—St. Paul, Minnesota, was the Mecca of medical men during the last week of May and the first days of June. The annual meeting of the Military Surgeons of the United States was held May 29–31; the American Academy of Medicine, June 1–3; the American Medical Association and its many adjunct societies, June 4–7. The physicians in attendance at the several meetings had a busy time throughout the sessions, but found time to view the sights of St. Paul and Minneapolis, and to appreciate the beauties of the Upper Mississippi and surrounding country. The local profession vied with one another in entertaining their guests, and the meetings were pronounced grand successes both socially and scientifically.

Association of Military Surgeons.—The tenth annual meeting of the association convened in St. Paul, May 30th, continuing three days. The attendance was good and representative of the departments included in the society.

Brigadier-General A. J. Stone presided, the meeting being called to order by Brigadier-General John F. Fulton. Prayer was offered by Archbishop Ireland, and an address of welcome by Governor Samuel R. Van Sant.

By action of the executive committee, Dr. Charles Fenger, of Chicago, was elected an honorary member.

The following officers were elected: President, Major John Van R. Hoff; first vice-president, General R. A. Blood; second vice-president, General Walter Wyman; treasurer, Lieutenant-Colonel H. A. Arnold; secretary, Major Jas. E. Pilcher.

American Academy of Medicine.—The twenty-sixth annual meeting of this society convened June 1st, with President Dr. S. D. Risley in the chair. Among the leading papers submitted were those of Dr. Thos. D. Davis, of Pittsburg, on the "First Year Medical Curriculum;" Dr. Chas. McIntyre, of Easton, Pennsylvania, "Is the Demand for Reciprocity Based on Fact or Fancy?" Dr. J. N. Hall, of Denver, "The Desirability of Reciprocity in Medical Literature;" and the address of President Risley, entitled, "Some of the Ethical and Sociologic Relations of the Physician to the Community," in which he showed that a "most striking characteristic of the medical man is a sense of obligation to the community; that this ethical attitude finds expression, not only in the daily routine of his laborious professional service, but in a pronounced educational influence on all those lines which pertain to the healthfulness of the people and their socio-medical welfare; that this influence is signally exerted in the investigations and control of the relation which our defective classes sustain to

the social body. Almost suddenly the student of social evolution has come to realize that through the altruistic spirit of our civilization a rapidly increasing percentage of degenerates have grown up in our midst, a fact which presents a serious and most complex problem for solution by the new century. Two suggestions are made for its arrest: 1, the legalization of means to prevent propagation of defectives by a sexualization; and 2, by a wider education of the community regarding the importance of selection in the marriage contract and its control by the State. To solve it wisely and humanely will require the best efforts of the churchman and the physician and the statesman."

The American Medical Association.—The association was called to order in the Metropolitan Opera House on June 4th by Dr. John F. Fulton, of St. Paul, chairman of the committee of arrangements. After prayer by Bishop Whipple, Mr. R. A. Smith, of St. Paul, delivered the address of welcome. The address of President Charles A. L. Reed followed, and gave attention to the foreign relations of the association, the fiscal affairs of the journal of the association, a *resume* of the scientific work of the society, the relation of the physician to the commonwealth, the reorganization of the association and many other questions of moment. In conclusion the president stated:

"The changes which I have advocated are essential for the attainment of the purposes of the association and for the fulfillment of the high destiny of our national profession. They are demanded by the changes that have taken place during the last fifty years. The legislative functions have passed from voluntary organizations to the congress and the legislatures, where they belong; but it still devolves upon the profession in the organized capacity, to stimulate, to restrain, or otherwise to control the law-making power. The responsibility of the profession is increased, rather than diminished. Science has come to have a clearer meaning. He who now proclaims a dogma cries alone in the night, while the world sleeps. They who demand a creed may read its varying terms only in the progressive revelation of natural laws. Practice has changed. The depletions, the gross medications, the absurd attenuations, the ridiculous antimineralism have given way to a refined pharmacy and to a more rational therapy. Sacrificial surgery has yielded to the spirit of conservatism. Prevention is given precedence over cure. Education implies research and discovery, and all may delve. I proclaim, events proclaim, the existence of a new school of medicine. It is as distinct from the schools of fifty years ago as is the Christian dispensation from its Pagan antecedents. It is the product of convergent influences of diverse antecedent origin. It acknowledges no distinctive title, it heralds no shibboleth. It is a school of human tolerance, of personal independence, of scientific honesty. It is the slave of neither prejudice nor preconception, and abandons the accepted truth of yesterday, if it only be the demonstrated error of to-day.

It places no premium upon personal prerogative, and extends no recognition to individual authority. It makes no proclamation of completeness, no pretention to sufficiency. It recognizes that truth is undergoing progressive revelation not ending to-day, but continuing through the ages. It yields its plaudits to achievement, and recognizes that he is the greatest among men who reveals the most of truth unto men. It greets as a friend him who thinks, though he think error, for, thinking, he may think truth and thereby add to the common fund. It heeds all things, examines all things, judges all things.

"To you, the exponents of this new school, of this new generation, of this new century; to you, representatives of the Democracy of Science; to you citizens of the Republic of Letters, I extend greetings; and here, in our parliament assembled, here, where our will is supreme, I this day invoke upon our deliberations the spirit of liberty, the spirit of courage, the spirit of progress, the spirit of truth."

Dr. J. R. Pennington, of Chicago, presented the association with a portrait of Dr. N. S. Davis, an ex-president of the society, and a committee was appointed to secure the portraits of all the ex-presidents. The secretary's report showed the active membership to be over 10,600, an increase of over 1500 during the year.

The most important event marking this meeting was the report of the committee on reorganization, which resulted in the adoption of a new constitution.

Under the old system, any accredited medical society of a city or State could send one delegate for each ten members to represent it and vote on all subjects. Under the new organization, there will be a "House of Delegates," made up of delegates from State societies, one from each, and one extra delegate in societies numbering more than four hundred members.

The subject of the recent abolishment of the army canteen by Congress, which was taken up by the Association of Military Surgeons and resolutions passed condemning this action of Congress, was again and again brought to the notice of the American Medical Association, but it was ruled that this was a matter which should not claim the attention of the association, and so the affair stood.

The general session of June 6th adopted the report of the nominating committee, electing the following officers for the ensuing year:

For president, Dr. John A. Wyeth, New York; first vice-president, Alonzo Garcelon, Maine; second vice-president, A. J. Stone, Minnesota; third vice-president, A. F. Jonas, Nebraska; fourth vice-president, John R. Dibrell, Arkansas; treasurer, Henry P. Newman, Illinois; secretary, Geo. H. Simmons, Illinois. On motion, the ballot of the committee was cast for Geo. W. Webster, Illinois, for librarian. Board of trustees, term expiring 1904: W. W. Grant, Colorado; John F. Fulton, Minnesota; T. J. Happel, Tennessee. Judicial council: Geo. Cook, New Hamsphire; H.

H. Grant, Kentucky; John B. Murphy, Illinois; Philip Marvel, New Jersey; Louis H. Taylor, Pennsylvania; John L. Dawson, South Carolina; N. Fred Essig, Washington. Oration in surgery: Harry Sherman, California. Oration in medicine: Frank Billings, Illinois. Oration in State medicine: J. M. Emmert, Iowa. Place of meeting, 1902, Saratoga Springs, New York.

American Medical Editors' Association.—This society, including in its membership list the representative medical editors and journalists of the country, held the most successful sessions in years. Officers elected for the ensuing year are: Alexander J. Stone, of St. Paul, president; Burnside Foster, of St. Paul, vice-president and Otho F. Ball, of St. Louis, secretary and treasurer.

NOTES OF THE MEETINGS.

Attendance.—The total registration for the American Medical Association in St. Paul reached 1805, which makes the convention one of the largest ever held by the association in the West. The attendance ran about 200 over what the arrangement committee had anticipated.

Scientific Research Fund. — John D. Rockefeller presented the association with $200,000, to be expended in scientific research under the direction of William H. Welch, of Johns Hopkins University, with the acquiescence of the association. Resolutions were drawn up thanking Mr. Rockefeller for his aid to the scientific research committee. It is not yet decided just how the money will be expended.

Military Surgeons' Banquet.—The banquet of the military surgeons at the Aberdeen was a decided success. Nearly all the delegates were present. The good feeling manifested kept the mirth alive. Dr. A. J. Stone acted as toastmaster, and introduced as the speakers Gov. Van Sant, Col. Charles Adams, Capt. Wertenbaker, Gen. Wheaton, Gen. Priestly, Maj. Griffith, and Dr. Bennett, of London, England.

Medical Temperance Association.—The annual meeting of the American Medical Association was held with about 200 members present, and the following resolutions were passed:

"WHEREAS, The American Medical Temperance Association, the members of which are physicians who have devoted years to the study of alcohol and its effects, and who are conversant with the work done by scientific men the world over to determine the effects of alcohol when given in any quantity, have noted the teachings of Prof. W. O. Atwater, of Wesleyan University, upon the food and medical value of alcohol, as set forth by him in the pages of the influential lay press; be it

"*Resolved*, That this association utterly repudiate the pro-alcohol doctrines of the said Prof. Atwater, as being contrary to the evidence deduced by scientific experiments, and that his conclusions are unwarranted by the evidence resulting from his own experiments. Be it further

"*Resolved*, That this association regards the teaching of Prof. Atwater as a source of danger to the laity, inasmuch as such teaching contributes towards the increased consumption of alcoholic beverages."

National Legislation Committee.—The committee on national legislation, which reported the canteen question to the general session, is one of the most impor-

tant standing committees of the American Medical Association. The committee has been continued for another year, with the same membership: Dr. H. L. E. Johnson,

DR. GEO. F. BUTLER.
"I'm glad I don't live here. I haven't seen a sick man since I struck town."

of Washington, D. C., chairman; William H. Welch, of Johns Hopkins University, Baltimore, and Dr. William L. Rodman, of Philadelphia.

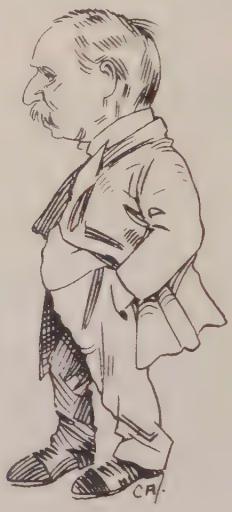
Major Seaman and Susan B. Anthony.—Maj. Seaman, the redoubtable leader of

DR. I. N. LOVE.
"I'd like to know how they make air up here; it's the best I ever tasted."

the anti-canteen repeal forces, had a warm half hour with Susan B. Anthony and a dozen other delegates from the suffragists, as he was leaving the Metropolitan Opera House. "I was alone," said Dr. Seaman, "and I would rather tackle a mob of Chinese Boxers than that crowd again; but I guess I did as good as I could."

Election of President.—The contest for the presidency was a spirited one, Dr. Wyeth being chosen on the second ballot. His principal competitor was Dr. Charles A. Wheaton, of St. Paul. The first ballot stood: Wyeth, 23; Wheaton, 17; Billings, 6. On the second ballot Dr. Wyeth received 25 votes to 20 for Dr. Wheaton.

Section Officers.—Laryngology and Otology—Chairman, G. Hudson McKuen, Philadelphia; secretary, J. F. Barnhill, Indian-



DR. VICTOR C. VAUGHN.

apolis; delegates to the house of delegates, George C. Stout, Philadelphia, and Emil Mayer, New York.

Stomatology—Chairman, A. H. Peck, Chicago; secretary, E. S. Talbot, Chicago; delegates, G. V. J. Brown, Milwaukee, and A. H. Baldwin, Chicago.

Ophthalmology—Chairman, Frank Allport, Chicago; secretary, C. A. Veasey, Philadelphia.

Pathology and Bacteriology—Chairman, F. B. Wyman, Indianapolis; secretary, W. T. Howard, Cleveland; executive committee, D. A. Stengel, of Philadelphia, W. S. Hall, of Chicago, L. Hektoon, of Chicago.

Diseases of Children—Chairman, H. M. McClanahan, Omaha; secretary, F. X. Walls, Chicago.

Cases of Brain Injury.—"Three Noteworthy Cases of Brain Injury" was the subject of a paper by Maj. G. T. Vaughan. One subject was a young white man, the second a young woman, and the third a negro, thirty-six years old. They were all considered singular and unusual in their symptoms. The white man suffered a fatal injury to the brain, without any fracture of the skull or injury to the dura mater. The woman had a great fracture extending all around the forehead, but the brain was unhurt. The negro was struck by a revolving wheel. The wheel was broken, and the brain was very much injured and a good deal of it lost.

DR. THOS. D. CROTHERS.

Oration on Medicine.—The annual oration on medicine was delivered by Dr. N. S. Davis, Jr., of Chicago, who took for his theme the progress made by medical science in the past century.

The Military Dentist.—Before the section of stomatology a valuable paper was submitted by John S. Marshall, president of the examining board of dental surgeons for the United States army. The title of the paper was "Military Dental Practice: Its Modifications and Limitations." It follows in part:

"The passage of the army reorganization bill, with its section creating a corps of dental surgeons for the United States army, makes an epoch in the history of modern dental surgery which has never had its counterpart before in the history of the world, the influence of which is destined

DR. JOHN H. MUSSER.

to be far-reaching in its beneficent results and of great importance in the elevation of our educational and professional standards.

"When we take into consideration the fact that modern dentistry covers in its growth and development a period less than

PRESIDENT-ELECT DR. JOHN A. WYETH
In a favorite pose.

the lifetime of many individuals, we have good reason to be proud of its achievements. Sixty years ago there was no such thing in existence as a dental college; a dental journal had not been thought of, or

DR. CHAS. A. L. REED
Delivering the President's Address.

a scientific society organized. The practice of dentistry at this time was, with few exceptions, in the hands of barbers and blacksmiths.

"We have special reason for congratulation also in the fact that the Congress of these United States was the first legislative body in the world to formally recognize the value and need of the beneficent services of our specialty as a department of military medical practice, that we have been given an opportunity to prove the wisdom of its action to our country and the world.

"The whole question, however, of placing dental surgeons in the army was looked upon by many of our national legislators in somewhat of the light of an experiment, and in a certain measure this was true of the war department, and of the surgeon-general. For this reason when the bill was framed it was thought best to provide for the organization of the dental corps upon the contract system, as by this system it would be an easy matter to discontinue it if it should prove unsuccessful.

"Following is the plan in brief outline upon which the army dental corps is organized: 1. The official status of the army dental surgeon. 2. The examination of candidates. 3. The assignment to duty. 4. The regulations governing the dental corps. 5. The supply table. 6. Nosological table and system of keeping records."

Dr. Geo. F. Butler.—Dr. Geo. F. Butler, superintendent of the Alma Sanitarium and editor of the *Doctor's Magazine*, was elected chairman of the section of materia medica.

President-Elect Dr. John A. Wyeth.—The president of the American Medical Association for the ensuing year was born in Alabama, May 26, 1845. He received early education in a military school and during the civil war served in a regiment of Alabama cavalry. After receiving his medical degree from the University of Louisville and later from Bellevue Medical College, he practiced for a time in his native State, but later removed to New York. Dr. Wyeth is best known to the profession through his text-book, "Wyeth's Surgery" and contributions to current medical literature.

St. Paul as a Health Resort.—In his address of welcome Mayor Smith stated: "St. Paul, as the statistical records of mortality show, is the healthiest city in the world; and it is so, I believe, in greatest measure, because of the high degree of perfection to which the medical profession has brought the science of hygiene.

"Within the lifetime of a single generation the soil upon which you now stand has upheld the Indian tepee. Here the Indian medicine man has, within that period, wrought his charms. The Indian tepee has been succeeded by the modern equipped hospital and the sanitary human dwelling; the incantations of the Indian doctor are forever silenced, and the cold and impersonal influence of medical and surgical science—as typified in the Medicine Man of Civilization—sways the lives and conserves and protects the health and happiness of human society. The change from the old conditions to the new, as illustrated in fifty years of life in the Capital City of the Great Northwest, is such as not only the members of your profession but humanity itself should rejoice in."

SECRETARY GEO. H. SIMMONS.

We are indebted to the *St. Paul Globe* and *Dispatch* for the sketches.

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PARVULES

THE term Parvule, from *Parvum*, (small) is applied to a class of remedies (Warner & Co.'s) in the form of minute pills, containing minimum doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses, given at short intervals, exert a more salutary effect. Sydney Ringer, M. D., in his recent works on Therapeutics, sustains this theory in great variety of cases. 20 cents per 100.

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MED. PROP.—ALTERATIVE, PURGATIVE.

DOSE.—1 to 2 every hour. Two Parvules of Calomel, taken every hour until five or six doses are administered (which will comprise but half a grain), produce an activity of the liver which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF CALOMEL AND IPECAC.

℞ Calomel, 1-10 gr.
Ipecac, 1-10 gr.

MED. PROP.—ALTERATIVE, PURGATIVE.

DOSE.—1 to 2 every hour. Two Parvules of Calomel and Ipecac, taken every hour until five or six doses are administered (which will comprise but a grain of Calomel), produce an activity of the liver, which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF ALOIN, 1-10.

MED. PROP.—A MOST DESIRABLE CATHARTIC.

The most useful application of this Parvule is in periodic irregularities—Dysmenorrhœa and Amenorrhœa. They should be given in doses of one or two every evening at and about the expected time.

DOSE.—4 to 6 at once. This number of Parvules, taken at any time, will be found to exert an easy, prompt, and ample Cathartic effect, unattended with nausea, and in all respects furnishing the most aperient and cathartic preparation in use. For habitual constipation, they replace when taken in single Parvules the various medicated waters, avoiding the quantity required by the latter as a dose, which fills the stomach and deranges the digestive organs.

PARVULES OF PODOPHYLLIN, 1-40.

MED. PROP.—CATHARTIC, CHOLAGOGUE.

Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

PARVULES OF NUX VOMICA, 1-50.

(WARNER & CO.)

Nux Vomica, according to Dr. Ringer, is possessed of real curative powers for sick headache, accompanied with acute gastric catarrh, whether due to error in diet, constipation, or to no apparent cause. He regards it, administered in small and frequently repeated doses, as useful in many disturbances of the gastric functions.

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INGLUVIN A Powder—Prescribed in the same manner, doses and combinations as pepsin.

A SPECIFIC FOR VOMITING IN GESTATION IN DOSES OF 10 to 20 Grains.

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For sale by all druggists or sent by mail on receipt of price. Physicians' private formulæ made up in lots of 3,000 and over. Pills, granules or compessed form. Write for quotations.

MEDICAL TREATMENT.

Treatment of Lumbago and Sciatica.—Grellety has obtained very satisfactory results in the treatment of lumbago and sciatica by friction with chloral liniment. In many of his cases other methods of treatment have proven unsuccessful. The writer's method was to rub vigorously the whole of the painful area for ten minutes, night and morning, with a liniment consisting of equal parts of chloral hydrate and olive oil. The chloral before being mixed with the oil should be dissolved in the smallest possible amount of water. The mixture should be prepared fresh for each treatment.

Rheumatism Acuta Treated by Aspiration.—Zagato insists on the efficacy of the aspiration treatment of the joints in acute rheumatism. After the fluid is removed, before taking out the needle inject a syringeful of two per cent. carbolic acid. Pain ceases at once and recovery follows.

Glycosuric Inadequacy.—Achard and Leeper have carried out a series of interesting investigations on the subject of transitory glycosuria. They find that sugar may appear in the urine in different degrees and at different times. These cases constitute a graduated series, having at one end diabetes mellitus, at the other a mere form of glycosuria, which is intermittent. This latter may show a considerable variation in its severity. It may appear if not present, or if present. may be considerably increased by the hypodermic injection of glucose. Considerable amounts of sugar injected into healthy persons will not cause glycosuria. Rheumatism is sometimes attended with glycosuria, particularly gonorrheal rheumatism. The same thing holds true in cases of cancer and tuberculosis nearing their end.

It has been noted by S. Miotti that in pregnancy of guinea-pigs the liver becomes progressively degenerated by fat as the pregnancy goes on. This is a true degeneration of the cells and not an infiltration. It would seem that in pregnancy there is a greater production of fat; at any rate, a smaller consumption of it is unlikely, for the fœtus calls for fat, especially in the latter months.

Sodium bicarbonate in the treatment of vomiting of pregnancy has proven very efficacious, two grammes being given in a capsule to overcome what has been considered the fundamental cause—*i. e.*, an overacid state.

HYDROZONE

(30 vol. preserved (H_2O_2 solution.)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER.
HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

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Successfully used in : **Whites, Leucorrhœa, Vaginitis, Metritis, Endometritis, Ulceration of the Uterus, — Urethritis, Gonorrhœa, — Cystitis, Ulcer of the Bladder, Etc.**

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cures all inflammatory and contagious diseases of the eyes.

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for besides being sterile and protected by our special package from impurities, it is so easy of digestion that the digestive functions are taxed only to their normal extent, and absorption and assimilation take place with ease. It is on this account as well as the soothing effect of egg-albumen on inflamed mucous membranes, that Eskay's proves to be

The Ideal Diet in Inflammatory Diseases *of the* Digestive Tract

Clinical Report

"For ten days I had a little patient suffering with entero-colitis living on ESKAY'S FOOD alone, during which time the stools dropped from thirty-two to two in twenty-four hours, vomiting ceased, and stools showed that digestion was being performed more properly. In the course of a few days milk was added to the food and in the course of about five weeks the baby was restored to health. I have never seen such good results from any food as this."

Dr. - - - - , Baltimore.

Clinical Report

"I have had the best results from the use of ESKAY'S FOOD in a case of gastro-enteritis. One case in particular showed no improvement whatever upon any diet until placed upon ESKAY'S FOOD. So far I am more than pleased with the results."

Dr. - - - - , Boston.

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SURGICAL SUGGESTIONS.

Prevention of Ventral Hernia Following Abdominal Section.—Eads (*Annals of Surgery*) believes that fifteen per cent. of all patients upon whom laparotomy has been performed, if examined five years or more later, will be found to be suffering from post-operative hernia. This may be prevented by the attending surgeon by careful attention to the manner of making the original incision. More attention should be paid to *making* of the incision than is commonly done: most surgeons are careless as to how they make the incision, but go into long dissertations on the closing of the wound. It is held that intact innervated muscular fiber is the only safeguard against ventral hernia. Surgeons should not cut unnecessarily nerve fibers in the abdominal wall. In performing the section, the surgeon should make his incision parallel with the motor fibers of the nerves of the abdomen. The author is in favor of a long skin incision and a blunt dissection of the muscular fibers.

Contracture of the Abdominal Muscles in Contusions.—Hartmann is of the opinion that contracture of the abdominal muscles is in favor of immediate laparotomy in cases of contusion. It is held also by Hartmann that absence of this contracture speaks against abdominal section in cases of contusion. Many cases are cited by him to support this dictum.

Intestinal Obstruction in Gall-Stones.—Sandler has reported a case of intestinal obstruction due to a large gall-stone being imbedded in the lumen of the intestine at a point eight inches above the ileo-cæcal valve.

Amputation of Both Feet Under Cocain Anesthesia.—Behle reports a case where in gangrene of both feet after an accident, in a weak and depressed patient (general anesthesia thus being contra-indicated), he amputated both feet by the use of cocain anesthesia. No bad result followed. This is a strong point in favor of the use of this agent in such cases, no bad results from the cocain having followed. Of course, this must be watched for and sometimes expected in those having an idiosyncrasy for the drug.

Proctorhapy in Prolapsus of the Rectum.—Suspension of the rectum is used as a curative measure in prolapse of the rectum. An incision is made through the left rectus muscle, the rectum caught up and pulled upon until the prolapse is overcome and the viscus held in place by fine silk sutures.

THYROID TREATMENT

S specific in Goitre, Myxedema, Cretinism and Obesity. It has been employed in Congestion of the Pelvic Organs, Fibroid Tumors of the Uterus, Menorrhagia, Endometritis and other Gynecological and Obstetrical cases. Good results have been reported from its use in Lupus, Psoriasis, Scleroderma, Ichthyosis and other skin diseases of an intractable nature; in Rheumatic Affections and in the manifestations of Arteriosclerosis, Prostatic Enlargement, Melancholia and Mental Disorders, especially those of the adolescent, puerperal and climacteric periods.

Physicians may depend upon the Armour Thyroid Preparations in all cases as the products are made from selected fresh material, are entirely free from diluents, and are the most concentrated products of the Thyroid Gland.

Samples and literature will be forwarded on receipt of a professional card.

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An American Text-Book of Diseases of the Eye, Ear, Nose and Throat. Edited by G. E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia; Consulting Ophthalmologist to the Philadelphia Policlinic; Ophthalmic Surgeon to the Philadelphia Hospital and to the Orthopedic Hospital and Infirmary for Nervous Diseases, and P. Alex Randall, M. A., M. D., Ph. D., Clinical Professor of Diseases of the Ear in the University of Pennsylvania; Professor of Diseases of the Ear in the Philadelphia Policlinic; Ophthalmic and Aural Surgeon to the Methodist and Children's Hospitals, Philadelphia. Illustrated with 766 engravings, 59 of them in colors. Philadelphia: W. B. Saunders, 925 Walnut street. 1899.

We desire to inform the medical men, both student and practicing classes, of the high value of the book before us. It goes into the subjects in a thorough manner, and has, in addition to the ordinary matter of the text-book, points which have not heretofore been exhibited, namely: chapters on operative work on the eyes of animals, a full description of operative work on man, and a good chapter by the editor on the bacteriology of eye affections. Optics are fully discussed. The diseases of the ear and nose are well treated. Composed as it is by a number of collaborators, the work portrays the experiences of leaders in these specialties. It is a contribution to medical science which well deserves the success that we bespeak for it.

An American Text-Book of Gynecology, Medical and Surgical, for Practitioners and Students. By Henry T. Byford, M. D., and a staff of editors. Edited by J. M. Baldy, M. D. Second edition, revised. With 341 illustrations in the text and 38 colored and half-tone plates. Philadelphia: W. B. Saunders. 1899.

We take pleasure in introducing this second edition of the work on gynecology by American authors before the profession. While it was an excellent thing even in its initial edition, still we can note marked improvement in the work as it now stands. The text-matter goes thoroughly into an exposition of the gynecologic procedures of the present day. Gynecology has made great strides here in America, and the medical profession is indeed fortunate in having the fruits of the work of the best men in this line set down in such a book as this, profusely illustrated and well gotten up. Its merit can be seen by all, and we therefore need only to mention the work to insure its attention.

The extreme caution that is necessary in the treatment of anaemia and other wasting diseases during the heat of summer is the best justification for the almost universal use of Scott's Emulsion in such cases at that period of the year.

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SUPPORTING the strength of the typhoid patient without overloading the stomach or fatiguing the intestine demands the most careful judgment on the part of the physician. The selection of a diet which will nourish the patient without giving distress, causing elevation of the temperature, or inducing diarrhœa presents a problem heretofore difficult of solution. The question has been satisfactorily settled in

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The ingestion of PLASMON even in the early stages of typhoid fever will not cause any rise in temperature; it nourishes the patient without overtaxing the digestive organs, stimulates the natural appetite, and if diarrhœa exists PLASMON has a tendency to check it without producing constipation.

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An Innovation in Effervescent Salts.—Every practicing physician in the South and West is more or less acquainted with effervescent salts and their advantages and disadvantages for general use, and they will all freely admit that the greatest and only drawback is their liability to deteriorate, turn yellow and not effervesce. They will also admit that if proper salts could be obtained that would keep their effervescence and granular form, that it is the best way to prescribe medicine. The human race, as a rule, especially in this part of the country, do not drink enough water to properly cleanse the system inside, which needs cleansing as well as the face and hands. By the physicians prescribing their remedies in this form, the patients get at least three or four half glasses of water into their systems a day, besides the medicinal properties which the same contains, and the carbonic gas which is thrown off by the effervescent salts coming in contact with the water, thereby killing all germs, etc., which the water may contain, besides greatly aiding in the digestion of food.

The effervescent salts manufactured by the St. Louis Granule Co. are warranted to keep forever in any climate, if kept properly corked; that is a claim which cannot be made by any other manufacturer of effervescent salts, as their goods will turn yellow and also go to powder, even in the original package, before the same has been opened.

William C. Pope, who is the manufacturer of these goods, has manufactured the same line of goods in Boston for the past twelve years, and he cheerfully refers to any physician or druggist in the New England States as to the truth of the above statement. The editor of this journal has read letters from the wholesale druggists of Boston, in which they state that in the twelve years they have handled the goods they have never had a single bottle returned.

You are cordially invited to write for samples and literature to the St. Louis Granule Co., 114 N. Broadway, St. Louis.

Tyree's Antiseptic Comp.—W. M. Gray, M. D., microscopist to the Army Medical Museum, states that the exact antiseptic strength of Tyree's pulv. antiseptic compound is one part of the powder to fifty of water. The product of Tyree's is recommended for treatment of leucorrheal and gonorrheal discharges. Information relative to this product can be secured from Mr. J. S. Tyree, chemist, Washington, D. C.